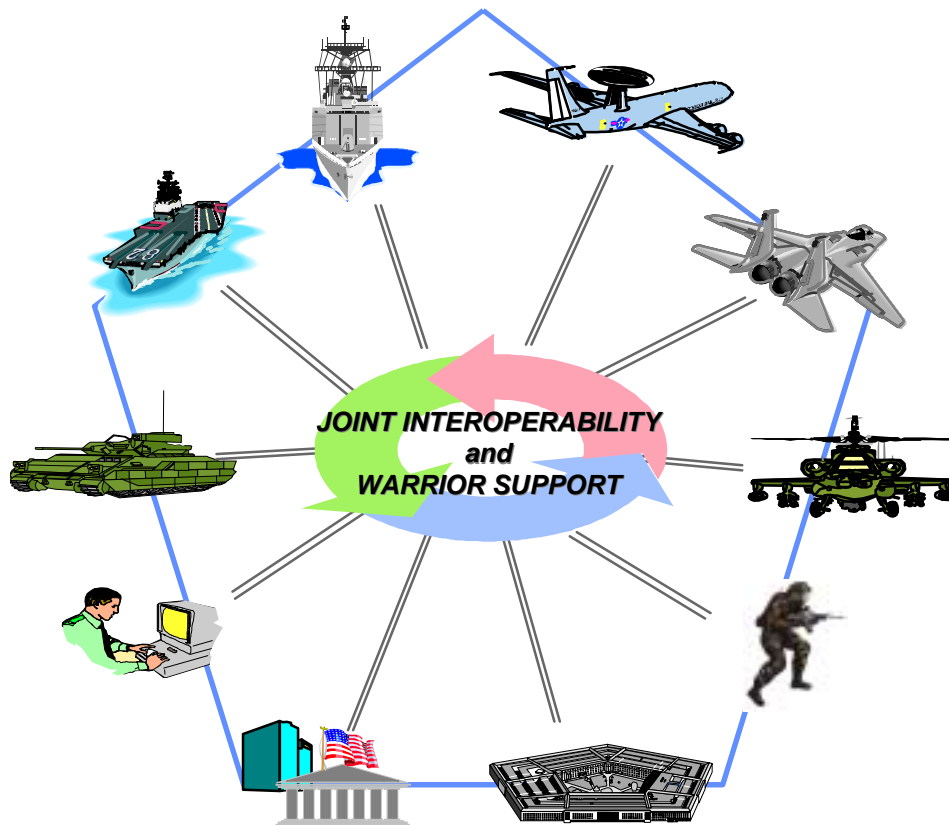


Department of Defense

Joint Technical Architecture

List of Mandated and Emerging Standards



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DRAFT - For Review Only - Not for Implementation

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Section 1 – Information-Technology Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
1.6.1 Defense Information Infrastructure Common Operating Environment	Defense Information Infrastructure Common Operating Environment, Integration and Runtime Specification (I&RTS), Version 4.0, 25 October 1999.	Defense Information Infrastructure Common Operating Environment, Integration and Runtime Specification (I&RTS), Version 3.1, 1 October 1998.		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
2.2.2.1.2.1 User Interface Service — POSIX	C320, Motif Toolkit API, Open Group Technical Standard, ISBN 1-85912-024-5, April 1995.			
	C323, XCDE Services and Applications, Open Group Technical Standard, ISBN 1-85912-074-1, April 1995.			
	C324, XCDE Definitions and Infrastructure, Open Group Technical Standard, ISBN 1-85912-070-9, April 1995.			
	C903, X Window System (X11R6): Protocol, The Open Group, July 1999.	same		
	C508, Window Management (X11R5): Xlib - C Language Binding, X/Open CAE Specification, May 1995, as updated by X11R6.	same		
	C509, Window Management (X11R5): X Toolkit Intrinsics, X/Open CAE Specification, May 1995, as updated by X11R6	same		
	C510, Window Management (X11R5): File Formats & Application Conventions, X/Open CAE Specification, May 1995	same		
	M021 CDE 2.1/Motif 2.1 User's Guide, ISBN 1-85912-173-X, October 1997			
	M023: CDE 2.1 Programmer's Overview and Guide, Open Group Product Documentation, ISBN 1-85912-183-7, October 1997.			
	M024A: CDE 2.1 Programmer's Reference, Volume 1, Open Group Product Documentation, ISBN 1-85912-188-8, October 1997.			
	M024B, CDE 2.1 Programmer's Reference, Volume 2, Open Group Product Documentation, ISBN 1-85912-193-4, October 1997.			
	M024C, CDE 2.1 Programmer's Reference, Volume 3, Open Group Product Documentation, ISBN 1-85912-174-8, October 1997.			
	M026: CDE 2.1 Application Developer's Guide, Open Group Product Documentation, ISBN 1-85912-198-5, October 1997.			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	M213, Motif 2.1 – Programmer's Guide, ISBN-1-85912-134-9, October 1997.	X/Open C323, Common Desktop Environment (CDE) Version 1.0, April 1995		
	M214A: Motif 2.1 – Programmer's Reference, Volume 1, ISBN 1-85912-119-5, October 1997.	X/Open C323, Common Desktop Environment (CDE) Version 1.0, April 1995		
	M214B: Motif 2.1 – Programmer's Reference, Volume 2, ISBN 1-85912-124-1, October 1997.	X/Open C323, Common Desktop Environment (CDE) Version 1.0, April 1995		
	M214C: Motif 2.1 – Programmer's Reference, Volume 3, ISBN 1-85912-164-0, October 1997.	X/Open C323, Common Desktop Environment (CDE) Version 1.0, April 1995		
	M216: Motif 2.1 — Widget Writer's Guide, Open Group Product Documentation, ISBN 1-85912-129-2, October 1997.	X/Open C323, Common Desktop Environment (CDE) Version 1.0, April 1995		
2.2.2.1.2.2 User Interface Service — Win32	Win32 APIs, as specified in the Microsoft Platform SDK.	same		There is no change in the content of the standard, only the media has changed.
2.2.2.1.3 Data Management Services	ISO/IEC 9075:1992, Information Technology – Database Language – SQL, with amendment 1, 1996, as modified by FIPS PUB 127-2:1993, Database Language for Relational DBMS (Entry Level SQL)	same		Entry-level SQL
	ISO/IEC 9075-3 – 1995 Information Technology – Database Languages – SQL – Part 3: Call-Level Interface (SQL/CLI)	Open Data-Base Connectivity ODBC 2.0		
2.2.2.1.4.1 Document Interchange	ISO 8879:1986, Information processing – Text and office systems – Standard Generalized Markup Language (SGML) with Amendment 1, 1988, Technical Corrigendum 1:1996 and Technical Corrigendum 2:1999.	same		
	HTML 4.01 Specification, W3C Recommendation, revised 24-Dec-1999, Rec-html401-199901224.	HTML 4.0 Specification, W3C Recommendation, revised on 24-Apr-1998, REC-html40-19980424		Interchange format used by the World Wide Web for hypertext format and embedded navigational links.

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	Extensible Markup Language (XML) 1.0 W3C Recommendation, 10 February 1998. Reference: REC-xml-19980210.			
2.2.2.1.4.2 Graphics Data Interchange	JPEG File Interchange Format (JFIF), Version 1.02, C-Cube Microsystems, 1992.	same		
	IETF RFC 2083 – Portable Network Graphics (PNG) Specification, Version 1.0, 1 January 1997.			
	Graphics Interchange Format (GIF), Version 89a, CompuServe Incorporated, 31 July 1990.	same		
2.2.2.1.4.3 Geospatial Data Interchange	MIL-STD-2411, Raster Product Format (RPF), 6 October 1994, with Notice of Change 1, 17 January 1995.			
	MIL-STD-2407, Interface Standard for Vector Product Format (VPF), 28 June 1996.	same		
	MIL-STD-2401, Department of Defense World Geodetic System (WGS-84), 11 January 1994.	same		
	FIPS PUB 10-4, Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions, April 1995 through Change Notice 3, 17 May 1999.	same		
2.2.2.1.4.4 Still Imagery Data Interchange	MIL-STD-2500B, National Imagery Transmission Format (Version 2.1) for the National Imagery Transmission Format Standard, 22 August 1997 with Notice 1, 2 October 1998.	MIL-STD-2500A, National Imagery Transmission Format (Version 2.0) for the National Imagery Transmission Format Standard, 12 October 1994; revised 7 February 1997		
	MIL-STD-188-196, Bi-Level Image Compression for the National Imagery Transmission Format Standard, 18 June 1993; with Notice 1, 27 June 1996.	same		Added “Change Notice”
	MIL-STD-188-199, Vector Quantization Decompression for the National Imagery Transmission Format Standard, 27 June 1994; with Notice 1, 27 June 1996.	same		Added “Change Notice”

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ISO/IEC 8632:1992 Computer Graphics Metafile (CGM) for the Storage and Transfer of Picture Description Information, as profiled by MIL-STD-2301A, Computer Graphics Metafile (CGM) Implementation Standard for the National Imagery Transmission Format Standard, 5 June 1998	MIL-STD 2301A, Computer Graphics Metafile (CGM) Implementation Standard for the National Imagery Transmission Format Standard, 18 June 1993 with Notice of Change 1, 12 October 1994		
	ISO/IEC 10918-1: 1994, Joint Photographic Experts Group (JPEG), as profiled in MIL-STD-188-198A, Joint Photographic Experts Group (JPEG) Image Compression for the National Imagery Transmission Format Standard, 15 December 1993; with Notice 1, 12 October 1994 and Notice 2, 14 March 1997.	MIL-STD-188-198A, Joint Photographic Experts Group (JPEG) Image Compression for the National Imagery Transmission Format Standard, 15 December 1993		Although the NITFS uses the same ISO JPEG algorithm as mandated in Section 2.2.2.2.1.4.2, the NITFS file format is not interchangeable with the JFIF file format.
	The Compendium of Controlled Extensions (CE) for the National Imagery Transmission Format (NITF), Version 1.0 25 August 1998.			
2.2.2.1.4.5.1.1 Video Imagery	ITU-R BT.601.4, Encoding Parameters of Digital Television for Studios, 1994.			
	ISO/IEC 13818-1:1996, Information Technology – Generic Coding of Moving Pictures and Associated Audio Information – Part 1: Systems (MPEG-2); 1996, with Amendment 1:1997.			
	ISO/IEC 13818-2:1996, Information Technology – Generic Coding of Moving Pictures and Associated Audio Information – Part 2: Video (MPEG-2); 1996, with Amendment 1:1997.			
	ISO/IEC 13818-4:1996, Information Technology – Generic Coding of Moving Pictures and Associated Audio Information – Part 4: Conformance Testing; 1996.			
	ANSI/SMPTE 12M-1999, Television, Audio, and Film – Time and Control Code.			
	ANSI/SMPTE 309M-1999, Television – Transmission of Date and Time Zone Information in Binary Groups of Time and Control Code.			
	ANSI/SMPTE 259M-1997, Television – 10 bit 4:2:2 Component (Serial Digital Interface)			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ANSI/SMPTE 292M-1998, Television – Bit-Serial Digital Interface for High-Definition Television Systems			
	ANSI/SMPTE 293M-1996, Television – 720 x 483 Active Line at 59.94-Hz Progressive Scan Production – Digital Representation.			
	ANSI/SMPTE 296M-1997, Television – 1270 x 720 Scanning, Analog and Digital Representation and Analog Interface.			
	ANSI/SMPTE 274M-1995, Television – 1920 x 1080 Scanning and Interface.			
	ANSI/SMPTE 297M-1997, Television – Serial Digital Fiber Transmission System for ANSI/SMPTE 259M Signals.			
	ANSI/SMPTE 291M-1996, Television – Ancillary Data Packet and Space Formatting.			
2.2.2.1.4.5.1.3 Video Support	ISO/IEC 11172-1:1993, Information technology – Coding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbits/s – Part 1: Systems, 1993; with Technical Corrigendum 1, 1995.	same		
	ISO/IEC 11172-2:1993, Information technology – Coding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbits/s - Part 2 Video, 1993.	same		
	ISO/IEC 13818-1:1996, Information technology – Generic Coding of Moving Pictures and Associated Audio Information – Part 1: Systems (MPEG-2), 1996 with Amendment 1:1997.	same		The identical text is also published as ITU-T Rec.H.222.0.
	ISO/IEC 13818-2:1996 – Generic Coding of Moving Pictures and Associated Audio Information – Part 2: Video (MPEG-2), 1996; with Amendment 1:1997 and Amendment 2:1997 (The identical text is also published as ITU-T Rec. H.262.)	same		The identical text is also published as ITU-T Rec.H.262.
2.2.2.1.4.6 Audio Data Interchange	ISO/IEC 11172-1:1993, Information Technology – Coding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbits/s - Part 1: Systems, 1993; with Technical Corrigendum 1:1995.	same		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ISO/IEC 11172-3:1993, Information Technology – Encoding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbits/s - Part 3 (Audio Layer-3 only); with Technical Corrigendum 1:1996.	same		
2.2.2.1.4.6.1.1 Audio for Video Imagery	ANSI S4.40-1992/AES3-1992, AES (Audio Engineering Society) Recommended Practice for Digital Audio Engineering – Serial transmission format for two-channel linearly represented digital audio data, 1992 (reaffirmed and amended 1997).	same		Used for digital audio signal interchange in uncompressed digital video
	ISO/IEC 13818-3:1995, Information technology – Generic coding of moving pictures and associated audio information, with Amendment 1:1996. Used for compressed digital audio systems, MPEG-2 Part 3: Audio.	same		
2.2.2.1.4.6.1.3 Audio for Video Support	ISO/IEC 11172-3: 1993, Information technology – Encoding of moving pictures and associated audio for digital storage media at up to about 1.5 Megabits per second (Mbit/s) – Part 3 (Audio Layer-3 only); with Technical Corrigendum 1:1996.	same		
2.2.2.1.4.6.2 Voice Encoder	MIL-STD-3005, Analog-to-Digital Conversion of Voice by 2400 Bit/Second Mixed Excitation Linear Prediction (MELP), 20 December 1999.			
2.2.2.1.4.7 Multimedia Data Interchange	ISO 9660:1988, Information processing – Volume and file structure of CD-ROM for information interchange			
2.2.2.1.4.8 Atmospheric and Oceanographic Data Interchange	FM 92-X Ext. GRIB WMO No. 306, Manual on Codes, International Codes, Volume 1.2 (Annex II to WMO Technical Regulations) Parts B and C.	same		
	FM 94-X Ext. BUFR WMO No. 306, Manual on Codes, International Codes, Volume 1.2 (Annex II to WMO Technical Regulations) Parts B and C.	same		
2.2.2.1.4.9 Time-of-Day Data Interchange	ITU-R TF.460-5, Standard-frequency and Time-signal Emissions 1997.	ITU-R Recommendation TF.460-4, Standard-frequency and Time-signal Emissions, International Telecommunications Union, July 1986		
	ITU-R TF.1010-1, Relativistic Effects in a Coordinate Time System in the Vicinity of the Earth, October 1997.			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
2.2.2.1.5 Graphic Services	ANSI/ISO/IEC 9636-1,2,3,4,5,6:1991 (R1997), Information Technology-Computer Graphics-Interfacing (CGI) Techniques for Dialogue with Graphics Devices.	same		Reaffirmed in 1997
	The OpenGL Graphics System: A Specification (Version 1.1) 25 June 1996 (for three-dimensional graphics).	same		For 3D Graphics.
2.2.2.1.7 Operating System Services	ISO/IEC 9945-1:1996, Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) [C language] (Mandated Services).	same		Note that emerging AUSTIN citation combines the 9945 series and Single UNIX specification into one standard.
	ISO/IEC 9945-1:1996:(Real-time Extensions) to ISO/IEC 9945-1:1996, Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) [C language] (Real-time Optional Services).	same		
	ISO/IEC 9945-1:1996: (Thread Extensions) to ISO/IEC 9945-1:1996, Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) [C language] (Thread Optional Services)	same		
	ISO/IEC 9945-2:1993, Information Technology – Portable Operating System Interface (POSIX) – Part 2: Shell and Utilities, as profiled by FIPS PUB 189: 1994, Information Technology - Portable Operating System Interface (POSIX) – Recommendations (Section 12) and Implementation Guidance (Section 13).	same		
	IEEE 1003.2d:1994, POSIX – Part 2: Shell and Utilities – Amendment: Batch Environment	same		
	ISO/IEC 14519:1999, Information Technology – POSIX Ada Language Interfaces – Binding for System Application Program Interface (API) – Realtime Extensions.	IEEE 1003.5b:1996, IEEE Standard for Information Technology – POSIX Ada Language Interfaces – Part 1: Binding for System Application Programming Interface (API) - Amendment 1: Realtime Extensions (incorporates IEEE 1003.5:1992)		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	IEEE 1003.13: IEEE Standard for Information technology – Standardization Applications Environment Profile – POSIX Realtime Application Program Interface (API).			
	Win32 APIs, as specified in the Microsoft Platform SDK.	same		There is no change in the content of the standard, only the media has changed.
2.2.2.1.8 International-ization Services	ISO/IEC 8859-1:1998, Information Processing – 8-Bit Single-Byte Coded Character Sets, Part 1: Latin Alphabet No. 1	same		
	ISO/IEC 10646-1:1993/Cor1:1996, Cor2:1998, Information Technology – Universal Multiple-Octet Coded Character Set (UCS), Part 1: Architecture and Basic Multilingual Plane with Technical Corrigendum 1:1996	same		
2.2.2.1.11.1 Remote-Procedure Computing	C310, DCE 1.1: Time Services Specification, X/Open CAE Specification, November 1994.	same		
	C311, DCE 1.1: Authentication and Security Services, Open Group CAE Specification, August 1997.	same		
	C705, DCE 1.1: Directory Services, Open Group CAE Specification, August 1997.	same		
	C706, DCE 1.1: Remote Procedure Call, Open Group CAE Specification, August 1997.	same		
2.2.2.1.11.2 Distributed-Object Computing	OMG document formal/99-10-07, Common Object Request Broker: Architecture and Specification, Version 2.3.1, October 1999.	The Common Object Request Broker: Architecture and Specification, Version 2.1, OMG document formal/1 September 1997.		
	OMG document formal/00-06-19, Naming Service Specification, Version 1.0, April 2000.	Naming Service, 7 December 1993, contained in CORBAServices: Common Object Services Specification, OMG Document formal/4 July 1997.		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	OMG document formal/00-06-15, Event Service Specification, Version 1.0, April 2000.	Event Notification Service, 7 December 1993, contained in CORBAServices: Common Object Services Specification, OMG document formal/24 February 1997		
	OMG document formal/00-06-28, Transaction Service Specification, Version 1.1, May 2000.	Object Transaction Service, 6 December 1994, contained in CORBAServices: Common Object Services Specification, OMG document formal/24 February 1997		
	OMG document formal/00-06-26, Time Service Specification, Version 1.0, May 2000.			
	OMG document formal/00-06-27, Trading Object Service Specification, Version 1.0, May 2000.			
	OMG document formal/00-06-20, Notification Service Specification, Version 1.0, June 2000.			
	OMG document orbos/98-06-01, CORBAServices DCE/CORBA Internetworking Service.			
	OMG document orbos/97-09-06, COM/CORBA Part B, Interworking, November 19, 1997.			
	OMG document orbos/97-09-07, COM/CORBA Part A Revision, November 19, 1997.			
2.3.1 Data Management			ANSI/ISO/IEC DIS 9075-1:1999, Information technology – Database languages – SQL – Part 1: Framework (SQL/Framework).	
			ANSI/ISO/IEC DIS 9075-2:1999, Information technology – Database languages – SQL – Part 2: Foundation (SQL/Foundation).	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			ANSI/ISO/IEC DIS 9075-3:1999, Information technology – Database languages – SQL – Part 3: Call-Level Interface (for SQL3).	
			ANSI/ISO/IEC DIS 9075-4:1999, Information technology – Database languages – SQL – Part 4: Persistent Stored Modules (SQL/PSM).	
			ANSI/ISO/IEC DIS 9075-5:1999, Information technology – Database languages – SQL – Part 5: Host Language Bindings (SQL/Bindings).	
			ISO/IEC 13249-3:1999, Information Technology – Database languages – SQL Multimedia and Application Packages – Part 3: Spatial.	
			ISO/IEC 9579:2000 Information Technology – Remote Database Access for SQL.	
			The Object Database Standard: ODMG 3.0, Edited by R.G.G. Cattell et al. The Morgan Kaufmann Series in Data Management, 2000, ISBN 1-55860-647-4.	
2.3.2.1 Document Interchange			XHTML™ 1.0: The Extensible HyperText Markup Language: A Reformulation of HTML 4.0 in XML 1.0, W3C Recommendation 26, January 2000.	
			XForms 1.0: Data Model W3C Working Draft, 06 April 2000.	
			XForms Requirements, W3C Working Draft, 29 March 2000.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			Resource Description Framework (RDF) Model and Syntax Specification, W3C Recommendation, 22 February 1999, REC-rdf-syntax-19990222.	
			Resource Description Framework (RDF) Schema Specification, W3C Recommendation, 27 March 2000, CR-rdf-schema-20000327.	
			Extensible Stylesheet Language (XSL) Version 1.0, W3C Working Draft, 27 March 2000.	
			XSL Transformations (XSLT) Version 1.1, W3C Recommendations, 16 November 1999.	
			XML Path Language (XPath) Version 1.0, W3C Recommendations, 16 November 1999.	
2.3.2.2.1 Virtual Reality Modeling Language			ISO/IEC 14772-1:1998, Information technology – Computer graphics and image processing - The Virtual Reality Modeling Language - Part 1: Functional specification and UTF-8 encoding.	
2.3.2.2.3 Portable Network Graphics (PNG)			ISO/IEC 15948:2000 Portable Network Graphics (PNG): Functional Specification Final Committee Draft (FCD).	
2.3.2.3 Still-Imagery Data Interchange			ISO/IEC 12087-5:1998, Part 5; Basic Image Interchange Format (BIIF) October 15, 1998.	
			ISO/IEC 15444-1:2000, JPEG 2000 Image Coding System.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
2.3.2.4.1.1 Video Imagery			MISB 0001-720P, 1280x720 Progressive High Definition Television Sample Structure, Analog and Digital Representation and Analog Interface, 27 July 2000.	
			SMPTE RP210.2-2000, SMPTE Metadata Dictionary Contents, 2000.	
			SMPTE Egxxx-2000, Node Structure for the SMPTE Metadata Dictionary, 2000.	
			SMPTE 335M-2000, Dynamic Metadata Dictionary Structure, 20 October 2000.	
			SMPTE 336M-2000, Data Encoding Using Key-Length Value (KLV), 20 October 2000.	
			MISP 9716, Packing KLV Packets into SMPTE 291M Ancillary Data Packets, 20 October 1999.	
			MISP 9717, Packing KLV Packets into MPEG-2 Systems Streams, 20 October 1999.	
			SMPTE RP213-2000, Format for Non-PCM Audio and Data in AES3 – KLV Data Type, 20 October 2000.	
			ATSC A/52 (Audio), Dolby Digital AC3 is an emerging standard for advanced television applications.	
2.3.2.6 Voice Encoder			Analog-to-Digital Conversion of Voice by 1200 Bit/Second Mixed Excitation Linear Prediction (MELP).	

Section 2 – Information Processing Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
2.3.3.1 POSIX			IEEE P1003.1a Draft Standard for Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) [C Language] – Amendment, Draft 16, December 1998.	
			ISO/IEC 1003.1d:1999 Standard for Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) – Amendment d: Additional Realtime Extensions [C Language].	
			IEEE P1003.1h D5, July 1999: Services for Reliable, Available, Serviceable Systems.	
			ISO/IEC 1003.1j:2000 Draft Standard for Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) – Amendment j: Advanced Realtime Extensions [C Language], Draft 7, October 1998.	
			IEEE P1003.1m – Draft Standard for Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) – Amendment m: Checkpoint/Restart Interface {C Language}, Draft 2, January 1999.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			P1003.1q - Draft Standard for Information Technology – Portable Operating System Interface (POSIX) – Part 1: System Application Program Interface (API) – Amendment x: Tracing [C Language], Draft 8, April 2000.	
			P1003.5g/D1, Standard for Information Technology – Portable Operating System Interface (POSIX) - Ada Language Interfaces – Part 1: Application Program Interface (API) – Amendment g: Realtime Extension, September 1999.	
			P1003.13a/D1, Standard for Information Technology – Standardized Application Environment Profile – POSIX Realtime Application Support (AEP) – Amendment a: Realtime Extension, September 1999.	
			P1003.21 Draft Standard for Information Technology – Portable Operating System Interface (POSIX) – Part 1: Realtime Distributed Systems Communication Application Program Interface (API) [Language-Independent], V3.0, October 1999.	
			C808, Networking Services (XNS), Issue 5.2, Open Group Technical Standard, C808 ISBN-1-85912-241-8, January 2000.	
2.3.4.1 Remote-Procedure Computing			OSF-DCE Version 1.2.2, was issued to developers by the Open Group in November 1997.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
2.3.4.2 Distributed-Object Computing			OMG document orbos/98-05-04, CORBA services CORBA/Firewall Security.	
			OMG document orbos/98-07-04, Summary of Firewall Errata.	
			OMG document orbos/98-10-11, Interoperable Naming Service, October 1998.	
			OMG document orbos/98-05-05, Revised Messaging RFP Submission.	
			OMG document orbos/98-08-04, Minimum Corba Joint Revised Submission.	
			OMG document orbos/99-02-12, Realtime CORBA Joint Revised submission.	
			OMG document orbos/99-03-29, Errata for the Realtime CORBA joint/revised submission orbos/99-02-12	
			OMG document orbos/99-07-07, Persistent State Service 2.0 Revised Specification.	
			OMG document formal/00-03-01, Meta Object Facility (MOF), version 1.3, April 2000.	
			OMG document ec/99-03-01, Negotiation Facility Final Revision Submission, 1 March 1999.	
			OMG Document Number: formal/00-05-22, Workflow Management Facility Specification, Version 1.2.	
			OMG document formal/00-06-35 Distributed Simulation Systems Specification, Version 1.0, April 2000.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			OMG document orbos/99-12-02, Portable Interceptors, Joint Revised Submission.	
			OMG document ptc/99-10-03, CORBA Component Model.	
2.3.5.1 Environment Management			DoD-5015.2-STD, Design Criteria Standard for Electronic Records Management Software Applications, November 1997 (Sections 2.2.1-2.2.1.1 only).	
2.3.5.2 Learning Technology			IEEE 1484.1, Architecture and Reference Model Working Group Document: "Learning Technology Systems Architecture (LTSA)," Draft 5, 1999-12-08 to/from: < http://ltsc.ieee.org/wg1/ >.	
			IEEE P1484.2, Learner Model Working Group Document "Public and Private Information (PAPI) for Learners, Draft Version 6, 2000-06-23, is linked to/from: < http://ltsc/ieee.org/wg2/ >.	
			IEEE P1484.12, Learning Object Metadata (LOM), Working Group Document: "Learning Object Metadata, Draft 4, 2000-02-05" is linked to/from: < http://ltsc/ieee.org/wg12/ >.	
			IEEE 1484.11, Computer Managed Instruction (CMI) Working Group Document: Computer-Managed Instruction (CMI), Draft 3.3, 1999-02," liked to/from: < http://itsc.ieee.org/doc/wg11/CMI-Sem33.doc >	

Section 3 – Information Transfer Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
3.2.1.2 Host Standards	IETF Standard 3 (RFC 1122 and RFC 1123), Requirements for Internet Hosts, October 1989.	same		
3.2.1.2.1.1 Electronic Mail	ACP 123 Edition A, Common Messaging Strategy and Procedures, 15 August 1997.	same		
	ACP 123 Edition A, U.S. Supplement No. 1, Common Messaging Strategy and Procedures, 15 August 1997.	same		
	IETF Standard 10/RFC 821/RFC 1869/RFC 1870, Simple Mail Transfer Protocol (SMTP) Service Extensions, November 1995.	same		
	IETF Standard 11/RFC 822, Standard for the Format of ARPA Internet Text Messages, 13 August 1982.	same		
	IETF RFCs 2045-2049, Multipurpose Internet Mail Extensions (MIME) Parts 1-5, November 1996.	same		
3.2.1.2.1.2.1 X.500 Directory Services	ITU-T X.500, The Directory – Overview of Concepts, Models, and Services – Data Communication Networks Directory, 1993.	same		
3.2.1.2.1.2.2 Lightweight Directory Access Protocol (LDAP)	IETF RFC 1777, Lightweight Directory Access Protocol (LDAP), March 1995.	same		
3.2.1.2.1.2.3 Domain Name System	IETF Standard 13/RFC 1034/RFC 1035, Domain Name System, November 1987.	same		
	IETF RFC 2136, Dynamic Updates in the Domain Name System, April 1997.			
3.2.1.2.1.3 File Transfer	IETF Standard 9/RFC 959, File Transfer Protocol, October 1985, with the following FTP commands mandated for reception: Store unique (STOU), Abort (ABOR), and Passive (PASV).	same		
3.2.1.2.1.4 Remote Terminal	IETF Standard 8/RFC 854/RFC 855, Telnet Protocol, May 1983.	same		
3.2.1.2.1.5 Network Time Synchronization	IETF RFC 1305, Network Time Protocol (V3), Specification Implementation and Analysis, March 1992.	same		
3.2.1.2.1.6 Bootstrap Protocol	IETF RFC 951, Bootstrap Protocol, 1 September 1985.	same		
	IETF RFC 2132 DHCP Options and BOOTP Vendor Extensions, March 1997.	IETF RFC 1533, DHCP Options and BOOTP Vendor Extensions, October 1993.		IETF RFC 2132 obsoletes IETF RFC 1533

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	IETF RFC 1542, Clarifications and Extensions for the Bootstrap Protocol, 27 October 1993.	same		
3.2.1.2.1.7 Configuration Information Transfer	IETF RFC 2131, Dynamic Host Configuration Protocol, March 1997.	IETF RFC 1541, Dynamic Host Configuration Protocol, 27 October 1993		IETF RFC 2131 obsoletes IETF RFC 1541
3.2.1.2.1.8.1 Hypertext Transfer Protocol	IETF RFC 2616, Hypertext Transfer Protocol – HTTP/1.1, June 1999.	IETF-RFC 1945, Hypertext Transfer Protocol - HTTP/1.0, 17 May 1996		
3.2.1.2.1.8.2 Uniform Resource Locator	IETF RFC 1738, Uniform Resource Locators, 20 December 1994.	same		
	IETF RFC 2396, Uniform Resource Identifiers (URI): Generic Syntax, August 1998.	IETF RFC 1808, Relative Uniform Resource Locators, June 1995		
3.2.1.2.1.9 Connectionless Data Transfer	MIL-STD-2045-47001B, Connectionless Data Transfer Application Layer Standard, 20 January 1998	same		
3.2.1.2.2.1.1 Transmission Control Protocol	IETF-Standard 7/RFC 793, Transmission Control Protocol, September 1981. In addition, PUSH flag and the NAGLE algorithm, as defined in IETF Standard 3, Host Requirements.	same		
	IETF RFC 2581, TCP Congestion Control, April 1999.	IETF RFC 2001, TCP Slow Start, Congestion Avoidance, Fast Retransmit, and Fast Recovery Algorithms, January 1997		IETF RFC 2581 obsoletes IETF RFC 1541.
3.2.1.2.2.1.2 User Datagram Protocol)	IETF Standard 6/RFC 768, User Datagram Protocol, 28 August 1980	same		
3.2.1.2.2.1.3 Internet Protocol	IETF Standard 5/RFC 791/RFC 950/RFC 919/RFC 922/ RFC 792/RFC 1112, Internet Protocol, September 1981. In addition, all implementations of IP must pass the 8-bit Type-of-Service (TOS) byte transparently up and down through the transport layer as defined in IETF Standard 3, Host Requirements.	same		
	IETF RFC 1770, IPv4 Option for Sender Directed Multi-Destination Delivery, 28 March 1995	same		To be used only with Combat Net Radio (CNR) routers.
	IETF RFC 2236, Internet Group Management Protocol, Version 2 (IGMP v2), November 1997.			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
3.2.1.2.2.2 OSI Transport Over IP-based Networks	IETF Standard 35/RFC 1006, ISO Transport Service on top of the TCP, May 1987.	same		
3.2.1.3 Video Teleconferencing Standards	H.221, Frame structure for 64 to 1920 Kbit/s channel in audiovisual services.			
	H.230, Frame-synchronous control and indication signals for audiovisual systems.			
	H.242, System for establishing communication between audio visual terminals using digital channels up to 2 Mbits/s.			
	H.261, Video CODEC for audiovisual services at px64 Kbps.			
	H.320, Narrow-band visual telephone systems and telephone equipment.			
	H.224, Real-time control protocol for simplex applications using the H.221 LSD/HSD/MLP channels.			
	H.281, Far-end camera control protocol for video conferences using H.224.			
	G.711, Pulse code modulation 3.1 KHz to 48, 56, and 64 (narrowband speech mode).			
	G.722, Audio CODEC, 7 KHz at 48, 56, and 64 Kbps (wideband speech).			
	G.728, Audio CODEC 3.1 KHz at 16 Kbps (narrowband speech mode).			
	H.231, Multipoint control unit functional description.			
	H.243, Procedure for establishing communication between three or more audiovisual terminals using digital channels up to 2 Mbit/s.			
	ITU-T T.4, Standardization of Group 3 Facsimile Terminals for Document Transmission, April 1999.			
	ITU-T T.81, Information Technology – Digital Compression and Coding of Continuous-tone Still Images – Requirements and Guidelines, September 1992.			
	ITU-T T.82, Information Technology – Coded Representation of Picture and Audio Information – Progressive Bi-level Image Compression, March 1993.			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ITU-T T.120, Transmission Protocols for Multimedia Data, July 1996.			
	ITU-T T.122, Multipoint Communications Service for Audiographic and Audio Visual Conferencing Service Definition, March 1993.			
	ITU-T T.123, Protocol Stacks for Audiographic and Audiovisual Teleconferencing Applications, November 1994.			
	ITU-T T.124, Generic Conference Control for Audiographic and Audiovisual Terminals and Multipoint Control Units, August 1995.			
	ITU-T T.125, Multipoint Communications Service Protocol Specification, April 1994.			
	ITU-T T.126, Multipoint Still Image and Annotation Conferencing Protocol Specification, August 1995.			
	ITU-T T.127, Multipoint Binary File Transfer Protocol, August 1995.			
	ITU-T T.128, Multipoint Application Sharing, January 1998.			
	ITU-T H.323, Packet-based Multimedia Communications Systems, January 1998.			For VTC terminals operating over Local Area Networks. For all other implementations of H.323, see emerging standards paragraph 3.3.1.2.
	ITU-T H.324, Terminal for Low Bit Rate Multimedia Communications, February 1998.	ITU-T H.324, Terminal for Low Bit Rate Multimedia Communications, March 1996		For VTC terminals operating at low bit rates (9.6-28.8 kbps)
	ITU-T H.244, Synchronized Aggregation of Multiple 64 or 56 Kbps channels, July 1995.	same		For VTC terminal operation with inverse multiplexers
3.2.1.4.1 Analog Facsimile Standards	EIA/TIA-465-A, Group 3 Facsimile Apparatus for Document Transmission, June 1995.	same		
	EIA/TIA-466-A, Procedures for Document Facsimile Transmission, May 1997.	same		
3.2.1.4.2 Digital Facsimile Standard	MIL-STD 188-161D, Interoperability and Performance Standards for Digital Facsimile Equipment, 10 January 1995.	same		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
3.2.1.5 Imagery Dissemination Communications Standards	MIL-STD-2045-44500, National Imagery Transmission Format Standard (NITFS) Tactical Communications Protocol 2 (TACO2), 18 June 1993; with Notice of Change 1, 29 July 1994; and Notice of Change 2, 27 June 1996.	same		
3.2.1.6 Global Positioning System	ICD-GPS-200C, NAVSTAR GPS Space Segment/ Navigation User Interfaces, 12 April 2000.			
	ICD-GPS-222A, NAVSTAR GPS UE Auxiliary Output Chip Interface (U), 26 April 1996.			
	ICD-GPS-225A, NAVSTAR GPS Selective Availability/Anti-spoofing Host Application Equipment Design Requirements with the Precise Positioning Service Security Module (U), 12 March 1998.			
3.2.2.1 Internetworking (Router) Standards	IETF RFC 1812, Requirements for IP Version 4 Routers, 22 June 1995.	same		
	IETF Standard 6/RFC 768, User Datagram Protocol, 28 August 1980.	same		
	IETF Standard 7/RFC 793, Transmission Control Protocol, September 1981.	same		
	IETF Standard 8/RFC 854/RFC 855, TELNET Protocol, May 1983.	same		
	IETF Standard 13/RFC 1034/RFC 1035, Domain Name System, November 1987.	same		
	IETF RFC 951, Bootstrap Protocol, 1 September 1985.	same		
	IETF RFC 2132, DHCP Options and BOOTP Vendor Extensions, March 1997.	IETF RFC 1533, DHCP Options and BOOTP Vendor Extensions, 8 October 1993		IETF RFC 2132 obsoletes IETF RFC 1533
	IETF RFC 2131, DHCP, Options on BOOTP Vendor Extensions, March 1997.	IETF RFC 1541, Dynamic Host Configuration Protocol, 27 October 1993		IETF RFC 2131 obsoletes IETF RFC 1541
	IETF RFC 1542, Clarifications and Extensions for the Bootstrap Protocol, October 1993.	same		
	IETF Standard 33/RFC 1350, The TFT Protocol Revision 2, July 1992, to be used for initialization only.	same		
3.2.2.1.1 Internet Protocol	IETF Standard 5/RFC 791/RFC 950/RFC 919/RFC 922/ RFC 792/RFC 1112, Internet Protocol, September 1981.	same		
	IETF RFC 2236, Internet Group Management Protocol, Version 2 (IGMP v2), November 1997.			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	IETF RFC 1770, IPv4 Option for Sender Directed Multi-Destination Delivery, March 1995.	same		To be used only with Combat Net Radio (CNR) routers.
3.2.2.1.2.1 Interior Routers	IETF Standard 54/RFC 2328, Open Shortest Path First Routing Version 2, April 1998, for unicast routing.	IETF RFC 1583, OSPF Version 2, March 1994		IETF STD 54/RFC 2328 obsoletes IETF RFC 1583, for unicast routing.
3.2.2.1.2.2 Exterior Routers	IETF RFC 1771, Border Gateway Protocol 4, (BGP-4) 21 March 1995.	same		
	IETF RFC 1772, Application of BGP-4 In the Internet, March 1995.	same		
3.2.2.2.1 Local Area Network Access	ISO/IEC 8802-3:1996, Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications, 10BASE-T Medium-Access Unit (MAU).	same		
	IEEE 802.3aa:1998, Maintenance Revision #5 (100 BASE-T), Standard for Information Technology – Local and Metropolitan Area Networks – Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications – Maintenance Revision #5 (100 BASE-T).	same		
	IETF Standard 41/RFC 894, Standard for the Transmission of IP Datagrams Over Ethernet Networks, April 1984.	same		
	IETF Standard 37/RFC 826, An Ethernet Address Resolution Protocol, November 1982.	same		
3.2.2.2.2 Point to Point Standards	IETF Standard 51/RFC 1661/RFC 1662, Point-to-Point Protocol (PPP), July 1994.	same		
	IETF RFC 1332, PPP Internet Protocol Control Protocol (IPCP), May 1992.	same		
	IETF RFC 1989, PPP Link Quality Monitoring (LQM), 16 August 1996.	same		
	IETF RFC 1994, PPP Challenge Handshake Authentication Protocol (CHAP), 30 August 1996.	same		
	IETF RFC 1570, PPP Link Control Protocol (LCP) Extensions, January 1994.	same		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	EIA/TIA 232-F, Interface Between Data Terminal Equipment and Data Circuit Terminating Equipment Employing Serial Binary Data Interchange, October 1997.	EIA/TIA 232E, Interface Between Data Terminal Equipment and Data Circuit Terminating Equipment Employing Serial Binary Data Interchange, July 1991		
	EIA/TIA 530-A, High Speed 25-Position Interface for Data Terminal Equipment and Data Circuit-Terminating Equipment, Including Alternative 26-Position Connector, December 1998 (This calls out EIA/TIA 422-B and 423-B.)	EIA/TIA 530A, High Speed 25-Position Interface for Data Terminal Equipment and Data Circuit-Terminating Equipment, June 1992, Including Alternate 26-Position Connector, 1992		
3.2.2.2.3 Combat Net Radio Networking	MIL-STD-188-220B, Interoperability Standard for Digital Message Transfer Device (DMTD) Subsystems, 20 January 1998.	same		
3.2.2.2.4 Integrated Services Digital Network	ANSI T1.601-1999, ISDN Basic Access Interface for Use on Metallic Loops for Application on the Network Side of the NT (Layer 1 Specification), 1999.	same		
	ANSI T1.605-1991 (R1999) ISDN Basic Access Interface for S and T Reference Points – Layer 1 Specification, 1991 (Reaffirmed 1999).			
	ANSI T1.403.01-1999, Network and Customer Installation Interfaces – (ISDN) Primary Rate Layer 1 Electrical Interface Specification, 1999.	same		
	ANSI T1.602-1996, ISDN Data Link Signaling Specification for Application at the User Network Interface, 1996.	same		
	ANSI T1.607-1998, Digital Subscriber Signaling System No. 1 (DSS1) – Layer 3 Signaling Specification for Circuit Switched Bearer Service, 1998.	same		
	ANSI T1.610-1998, DSS1 – Generic Procedures for the Control of ISDN Supplementary Services, 1998.	same		
	ANSI T1.619-1992, Multi-Level Precedence and Preemption (MLPP) Service, ISDN Supplementary Service Description, 1992.	same		
	ANSI T1.619a-1994, Supplement, 1994.	same		
	ANSI T1.111-1996, Signaling System No. 7, Message Transfer Part, 1996.			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ANSI T1.112-1996, Signaling System No. 7, Signaling Connection Control Part Functional Description, 1996.			
	ANSI T1.113-1995, Signaling System No. 7, ISDN User Part, 1995.			
	ANSI T1.114-1996, Signaling System No. 7, Transaction Capability Application Part, 1996.			
	ITU-T E.164, Numbering Plan for the ISDN Era, May 1997.	same		
	DISA Circular (DISAC) 310-225-1, Defense Switched Network (DSN) User Services Guide, 2 April 1998.	same		
	IETF RFC 1356, Multiprotocol Interconnect on X.25 and ISDN in the Packet Mode, 6 August 1992.	same		
	IETF RFC 1618, PPP over ISDN, 13 May 1994.	same		
3.2.2.2.5 Asynchronous Transfer Mode	ATM Forum, af-phy-0040.000, Physical Interface Specification for 25.6 Mbps over twisted pair, November 1995.	same		For Physical Layer
	ATM Forum, af-uni-0010.002, ATM UNI Specification V3.1, Section 1 and 2.4, September 1994	same		For Physical Layer
	ATM Forum, af-phy-0015.000, ATM Physical Medium Dependent Interface for 155 Mbps over Twisted Pair Cable, September 1994.			
	ATM Forum, af-phy-0016.000, DS1 Physical Layer Specification, September 1994	same		For Physical Layer
	ATM Forum, af-phy-0054.000, DS3 Physical Layer Interface Specification, January 1996.	same		For Physical Layer
	ATM Forum, af-phy-0046.000, 622.08 Mbp/s Physical Layer Specification, January 1996.	same		For Physical Layer
	ATM Forum, af-phy-0064.000, E1 Physical Interface Specification, September 1996.			For Physical Layer
	ATM Forum, af-phy-0043.000, A Cell-based Transmission Convergence Sublayer for Clear Channel Interfaces, November 1995.			
	ATM Forum, af-phy-0086.000, Inverse Multiplexing for ATM (IMA) Specification Version 1.0, July 1997.			
	ATM Forum, af-uni-0010.002, ATM UNI Specification V 3.1, September 1994	same		For User to Network Interface
	ATM Forum, af-sig-0061.000, ATM UNI Signaling Specification, Version 4.0, July 1996.			For User to Network Interface

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ATM Forum, af-ilmi-0065.000, Integrated Local Management (ILMI) Specification, Version 4.0, September 1996.			For Layer Management Capabilities
	ATM Forum, af-uni-0010.002, ATM UNI Specification V 3.1, (Section 4: ILMI for UNI 3.1), September 1994.	same		For Layer Management Capabilities
	ATM Forum, af-tm-0056-000, Traffic Management Specification, Version 4.0, April 1996.			For Traffic Management Functions
	ATM Forum, af-vtoa-0078.000, Circuit Emulation Service Interoperability Specification, Version 2.0, January 1997.			For Circuit Emulation Functions
	ITU-T I.363.1, B-ISDN ATM Adaptation Layer Specification: Type 1 ATM Adaptation Layer (AAL1), August 1996.	ANSI T1.630		For AAL1 Functions
	ITU-T I.363.5, B-ISDN ATM Adaptation Layer Specification: Type 5 ATM Adaptation Layer (AAL5), August 1996.	ANSI T1.635		For AAL5 Functions
	ATM Forum, af-pnni-0055.000, Private Network to Network Interface (PNNI) Specification, Version 1.0, March 1996.	same		For Private Network to Network Interfaces
	ATM Forum, af-pnni-0066.000, PNNI Specification, Version 1.0 Addendum (Soft PVC MIB), September 1996.	same		For Private Network to Network Interfaces
	ATM Forum, af-lane-0084.000, Local Area Network Emulation (LANE) Over ATM Version 2.0 – LUNI Specification, July 1997.			
	ATM Forum, af-lane-0093.000, LANE Client Management Specification, Version 2.0, October 1998.	same		For LAN Emulation and IP over ATM
	ATM Forum, af-mpoa-0087.000, Multi-Protocol Over ATM, Version 1.0, July 1997.			
	DoD ATM Addressing Plan, 17 April 1998.	ATM Addressing Format specified as Notice of Change 1, 20 Oct 1997, to MIL-STD-188-176, Standardized Profile for ATM, 21 May 1996		Same Addressing Plan under separate cover.

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
3.2.2.2.6 Gigabit Ethernet	IEEE 802.3-1998, IEEE Standard for Information Technology (Clauses 34-42) – Telecommunications and Information Exchange Between Systems – Local and Metropolitan Area Networks – Specific Requirements – Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications, (originally developed as IEEE 802.3z-1998).			
	IEEE 802.3ab-1999 IEEE Standard for Information Technology – Telecommunications and Information Exchange Between Systems – Local and Metropolitan Area Networks – Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications – Physical Layer Parameters and Specifications for 1000Mb/s Operation over 4-Pair of Category 5 Balanced Copper Cabling, Type 1000BASE-T.			
3.2.3.1.1.1 5- and 25-kHz Service	MIL-STD-188-181B, Interoperability Standard for Single Access 5-kHz and 25-kHz UHF Satellite Communications Channels, 20 March 1999.	MIL-STD-188-181A, Interoperability Standard for Single Access 5-kHz and 25-kHz UHF Satellite Communications Channels, 31 March 1997.		
3.2.3.1.1.2 5-kHz DAMA Service	MIL-STD-188-182A, Interoperability Standard for 5 kHz UHF DAMA Terminal Waveform, 31 March 1997; with Notice of Change 1, 9 September 1998; Notice of Change 2, 22 January 1999; and Notice of Change 3, 4 June 1999	same without Notices of Change		
3.2.3.1.1.3 25-kHz TDMA/DAMA Service	MIL-STD-188-183A, Interoperability Standard for 25 kHz TDMA/DAMA Terminal Waveform (Including 5- and 25-Khz Slave Channels), 20 March 1998; with Notice of Change 1, dated 9 September 1998; and Notice of Change 2, 4 June 1999.	MIL-STD-188-183, Interoperability Standard for 25 kHz UHF/TDMA/DAMA Terminal Waveform, 18 September 1992, with Notice of Change 1, dated 2 December 1996		
3.2.3.1.1.4 Data Control Waveform	MIL-STD-188-184, Interoperability and Performance Standard for the Data Control Waveform, 20 August 1993; with Notice of Change 1, 9 September 1998.	same without Notice of Change		Added "Notice of Change 1".
3.2.3.1.1.5 DAMA Control System	MIL-STD-188-185, DoD Interface Standard, Interoperability of UHF MILSATCOM DAMA Control System, 29 May 1996; with Notice of Change 1, 1 December 1997; and Notice of Change 2, 9 September 1998.	same without Notices of Change		Added "Notice of Change 2"

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
3.2.3.1.2.1 Earth Terminals	MIL-STD-188-164, Interoperability and Performance Standards for C-Band, X-Band, and Ku-Band SHF Satellite Communications Earth Terminals, 13 January 1995; with Notice of Change 1, 9 September 1998.	same without Notice of Change		Added "Notice of Change 1"
3.2.3.1.2.2 Phase-Shift Keying Modems	MIL-STD-188-165, Interoperability and Performance Standards for SHF Satellite Communications PSK Modems (Frequency Division Multiple Access (FDMA) Operations), 13 January 1995; with Notice of Change 1, 9 September 1998.	same without Notice of Change		Added "Notice of Change 1"
3.2.3.1.3.1 Low Data Rate	MIL-STD-1582D, EHF LDR Uplinks and Downlinks, 30 September 1996; with Notice of Change 1, 14 February 1997; Notice of Change 2, 17 February 1999.	same without Notice of Change 2		Added "Notice of Change 2"
3.2.3.1.3.2 Medium Data Rate	MIL-STD-188-136A, EHF MDR Uplinks and Downlinks, 8 June 1998; with Notice of Change 1, 1 July 1999.	MIL-STD-188-136, EHF MDR Uplinks and Downlinks, 26 August 1995; with Notice of Change 1, 15 August 1996, and Notice of Change 2, 14 February 1997		Updated version of MIL-STD-188-136
3.2.3.1.4 Satellite State of Health Communication Standards	CCSDS 401.0 – B-6, Radio Frequency and Modulation Systems – Part 1: Earth Stations and Spacecraft, May 2000, Consultative Committee for Space Data Systems.			
	ISO 11754, Telemetry Channel Coding, 1994, International Standardization Organization.			
	ISO 12171, Telecommand, Channel Service, Architectural Specification, 1998, International Standardization Organization.			
	ISO 12172, Telecommand, Data Routing Service, 1998, International Standardization Organization.			
	ISO 12173, Telecommand, Command Operation Procedures, 1998, International Standardization Organization.			
	ISO 12174, Telecommand, Data Management Service, Architectural Specification, 1998, International Standardization Organization.			
	ISO 13419, Packet Telemetry, 1997, International Standardization Organization.			

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
3.2.3.2.1 Low Frequency and Very Low Frequency	MIL-STD-188-140A, Equipment Technical Design Standards for Common Long Haul/Tactical Radio Communications in the LF Band and Lower Frequency Bands, 1 May 1990	same		
3.2.3.2.2.1 HF and Automated Link Establishment	MIL-STD-188-141B, Interoperability and Performance Standards for Medium and High Frequency Radio Systems, 1 March 1999.	MIL-STD-188-141A, Interoperability and Performance Standards for Medium and High Frequency Radio Equipment Standard, 15 September 1988; with Notice of Change 1, 17 June 1992; and Notice of Change 2, 10 September 1993		
3.2.3.2.2.2 Anti-Jamming Capability	MIL-STD-188-148A, Interoperability Standard for Anti-Jam Communications in the HF Band (2-30 MHz), 18 March 1992.	same		
3.2.3.2.2.3 Data Modems	MIL-STD-188-110A, Data Modems, Interoperability and Performance Standards, 30 September 1991.	same		
3.2.3.2.3 Very High Frequency	MIL-STD-188-242, Tactical Single Channel (VHF) Radio Equipment, 20 June 1985.	same		
3.2.3.2.4.1 UHF Radio	MIL-STD-188-243, Tactical Single Channel (UHF) Radio Communications, 15 March 1989.	same		
3.2.3.2.4.2 Anti-Jamming Capability	STANAG 4246, Edition 2, HAVE QUICK UHF Secure and Jam-Resistant Communications Equipment, 17 June 1987; with Amendment 3, August 1991.	same		
3.2.3.2.5 Super High Frequency	MIL-STD-188-145, Digital Line-of-Sight (LOS) Microwave Radio Equipment, 7 May 1987; with Notice of Change 1, 28 July 1992.	same		
3.2.3.2.6 Link 16 Transmission Standards	(S) STANAG 4175, Edition 1, Technical Characteristics of the Multifunctional Information Distribution System (MIDS), 29 August 1992 (U).	same		Previous section (service area) in Volume 1.0 was named "JTIDS/MIDS Transmission Media"
3.2.3.3 SONET Transmission Facilities	ANSI T1.105-1995, Telecommunications – Synchronous Optical Network (SONET) Basic Description Including Multiplex Structure, Rates and Formats (Revision and Consolidation of ANSI T1.105-1991 and ANSI T1.105A-1991), 1995	same		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ANSI T1.107-1995, Digital Hierarchy – Formats Specifications, 1995.	same		
	ANSI T1.117-1991 (R 1997), Digital Hierarchy – Optical Interface Specifications (Single Mode – Short Reach), 1991 (Reaffirmed 1997).	same		
3.2.4.1 Data Communications Management	IETF Standard 15/RFC 1157, Simple Network Management Protocol (SNMP), May 1990.	same		
	IETF Standard 16/RFC 1155/RFC 1212, Structure of Management Information, May 1990.	same		
	IETF Standard 17/RFC 1213, Management Information Base, March 1991.	same		
	IETF RFC 1514, Host Resources MIB, September 1993.	same		
	IETF Standard 50/RFC 1643, Definitions of Managed Objects for the Ethernet-like Interface Types, July 1994.	same		
	IETF RFC 1757, Remote Network Monitoring Management Information Base (RMON Version 1), February 1995.	same		
	IETF RFC 1850, Open Shortest Path First (OSPF) Version 2 Management Information Base, November 1995.	same		
3.2.4.2 Telecommunications Management	ANSI T1.204, 1997, OAM&P – Lower Layer Protocols for TMN Interfaces Between Operations Systems and Network Elements, 1997.	ANSI T1.204, OAM&P – Lower Layer Protocols for TMN Interfaces Between Operations Systems and Network Elements, 1993.		
	ANSI T1.208, 1997, OAM&P – Upper Layer Protocols for TMN Interfaces Between Operations Systems and Network Elements, 1997.	ANSI T1.208, OAM&P – Upper Layer Protocols for TMN Interfaces Between Operations Systems and Network Elements, 1993		
	ITU-T M.3207.1, TMN management service: maintenance aspects of B-ISDN management, 1996.	same		
	ITU-T M.3211.1, TMN management service: Fault and performance management of the ISDN access, 1996.	same		
	ITU-T M.3400, TMN Management Functions, 1997.	ITU-T M.3400, TMN Management Functions, 1992		

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ISO/IEC 9595:1998: Information Technology – Open Systems Interconnection Common Management Information Services (CMIS).	ISO/IEC 9595, Information Technology – Open Systems Interconnection Common Management Information Services, December 1991		
	ISO/IEC 9596-1:1998 Information Technology – Open Systems Interconnection – Common Management Information Protocol (CMIP) – Part 1: Specification.	ISO/IEC 9596-1:1991 Information Technology – Open Systems Interconnection – Common Management Information Protocol (CMIP) – Part 1: Specification		
	ISO/IEC 9596-2:1993 Information Technology – Open Systems Interconnection – Common Management Information Protocol (CMIP): Protocol Implementation Conformance Statement (PICS) proforma.	same		
3.3.1.1 Internet Standards			IETF RFC 2373, Internet Protocol, Version 6 (IPv6) Addressing Architecture, July 1998.	
			IETF RFC 2374, IPv6 Aggregatable Global Unicast Address Format, July 1998.	
			IETF RFC 2460, Internet Protocol, Version 6 (IPv6) Specification, December 1998.	
			IETF RFC 2461, Neighbor Discovery for IP Version 6, (IPv6), December 1998.	
			IETF RFC 2462, IPv6 Stateless Address Autoconfiguration, December 1998.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IETF RFC 2463, Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification, December 1998.	
			IETF RFC 2205 Resource ReSerVation Protocol RSVP Version 1 Functional Specification, September 1997.	
			ITU-T Recommendation H.323 (Version 2), January 1998.	
			IETF RFC 2543, Session Initiation Protocol (SIP), March 1999.	
			IETF, draft-ietf-megaco-protocol-08.txt, Megaco Protocol, April 2000.	
3.3.1.2 Video Teleconferencing Standards			ITU-T H.310	ITU-T H.310 includes underlying standards for video (MPEG2) and audio (MPEG1, MPEG2). H.310 can be used for high-quality VTC requiring >2 Mbps infrastructure, but does not currently have much industry support.

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			ITU-T H.321	ITU-T H.321 specifies the operation of H.320 codecs over ATM using AAL-1 or AAL-5. H.321 uses Quality of Service to manage videoconferencing quality. It lacks industry wide support.
			ITU-T H.323	ITU-T H.323 has the most industry support for VTC over ATM. It provides for two modes of operation over ATM: 1) IP over ATM media stream and 2) Real-Time Protocol (RTP) over ATM media stream transport (H.323 Annex C). Implementation of H.323 over non-LAN media (e.g., Metropolitan Area Networks (MANs) and WANs, such as the Internet, SIPRNET, JWICS) is still evolving.
3.3.1.3 Communication Protocols for High- Stress Resource- Constrained Environments			CCSDS 713.0-B-1/ISO 15891:2000 Space data and information transfer systems – Protocol specification for space communications – Network protocol, 5 October 2000. (Adopts MIL-STD-2045-4300)	Adopts MIL-STD-2045-4300

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			CCSDS 713.5-B-1/ISO 15892:2000 Space data and information transfer systems – Protocol specification for space communications – Security protocol, 5 October 2000. (Adopts MIL-STD-2045-4301)	Adopts MIL-STD-2045-4301
			CCSDS 714.0-B-1/ISO 15893:2000 Space data and information transfer systems – Protocol specification for space communications – Transport protocol, 5 October 2000. (Adopts MIL-STD-2045-4400)	Adopts MIL-STD-2045-4400
			CCSDS 717.0-B-1/ISO 15894:2000 Space data and information transfer systems – Protocol specification for space communications – File protocol, 5 October 2000. (Adopts MIL-STD-2045-4700).	Adopts MIL-STD-2045-47000
3.3.1.4 Global Positioning System			SS-GPS-001A, Navstar GPS Selective Availability Anti-Spoofing Module System Specification, 27 Sep 99.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
3.3.2.1 Wireless LAN			ISO/IEC 8802-11:1999 (ISO/IEC) (IEEE Std 802.11, 1999 Edition) Information technology– Telecommunications and information exchange between systems--Local and metropolitan area networks – Specific requirements--Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications	
			IEEE 802.11a, 1999 Supplement to Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements – Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: High Speed Physical Layer (PHY) in the 5 GHz Band.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IEEE 802.11b, 1999 Supplement to Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements – Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Higher Speed Physical Layer (PHY) Extension in the 2.4 GHz band.	
3.3.2.2 ATM-Related Standards			ATM Forum, af-tm-0121.000, Traffic Management Specification Version 4.1, March 1999 - ATM Forum;	
			ATM Forum, af-sig-0076.000, Addendum to UNI Signalling V4.0 for ABR parameter negotiation, January 1997.	
			ATM Forum, af-mpoa-0114.000, Multi-Protocol Over ATM Version 1.1, May 1999.	
			ATM Forum, af-vtoa-0113.000, ATM Trunking Using AAL2 for Narrowband Services, February 1999.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			ATM Forum, af-phy-0086.001, Inverse Multiplexing for ATM (IMA) Specification Version 1.1, March 1999.	
			ATM Forum, af-saa-0124.000, Gateway for H.323 Media Transport Over ATM, July 1999.	
			ATM Forum, af-vtoa-0119.00, Low Speed Circuit Emulation Service (LSCES), May 1999.	
			ATM Forum, af-lane-0112.000, LAN Emulation Over ATM Version 2 - LNNI Specification, February 1999	
			ATM Forum, af-ra-0123.000, PNNI Addendum for Mobility Extensions, Version 1.0, May 1999.	
			ATM Forum, af-sec-0096.000, ATM Security Framework Specification Version 1.0, February 1998.	
			TIA/EIA/IS-787, Common ATM Satellite Interface Interoperability Specification (CASI), July 1999.	
3.3.2.3 Network QoS Standards			IETF RFC-2205, Resource ReSerVation Protocol (RSVP) – Version 1 Functional Specification, September 1997.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IETF RFC 2207, RSVP Extensions for IPSEC Data Flows, September 1997.	
			IETF RFC-2380, RSVP over ATM Implementation Requirements, August 1998.	
			ISO/IEC 15802-3; IEEE 802.1D dtd 25 JUN 1998 Information Technology –Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Networks – Common Specifications – Part 3: Media Access Control (MAC) Bridges (Replaces IEEE P802.1P, 802.1J-1996, 802.6K-1992, 802.11C-1998, and P802.12E).	
			IEEE 802.1Q-1998 IEEE Standard for Local and Metropolitan Area Networks: Virtual Bridge Local Area Networks.	
3.3.2.4 Personal Communications Services and Mobile Cellular			ANSI/J-STD-018-96, Recommended Minimum Performance Requirements for 1.8 to 2.0 GHz CDMA Personal Stations.	
			ANSI/J-STD-019-96, Recommended Minimum Performance Requirements for Base Stations Supporting 1.8 to 2.0 GHz CDMA Personal Stations.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			TIA/EIA-95-B-99, Mobile Station-Base Station Compatibility for Wideband Spread Spectrum Cellular Systems.	
			TIA/EIA-41-D-97, Cellular Radio Telecommunications Intersystem Operations.	
3.3.5.2 Network Management			IETF RFC 2515, Definitions of Managed Objects for ATM Management, February 1999.	Defines a set of standard objects for managing ATM switches.
			IETF RFC 1657 Definitions of Management Objects for the Fourth Version of the Border Gateway Protocol (BGP-4) using SMIv2, July 1994.	Defines a set of standard objects for managing this internetwork routing protocol.
			IETF RFC 1611, DNS Server MIB Extensions, May 1994.	Defines a set of standard objects for managing this internetwork routing protocol.
			IETF RFC 1612, DNS Resolver MIB Extensions, May 1994.	Defines a set of standard objects for managing this internetwork routing protocol.
			IETF RFC 2006 Definitions of Managed objects for IP Mobility Support using SMIv2, October 1996.	Defines a set of standard objects for managing traditional static IP and emerging mobile IP services.

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IETF RFC 2011, SNMPv2 Management Information Base for the Internet Protocol, November 1996.	
			IETF RFC 1471 Definitions of Managed Objects for the Link Control Protocol of the Point-to-Point Protocol, June 1993.	Define a set of standard objects for managing PPP links, security, IP network level, and bridge-level services.
			IETF RFC 1472, Definitions of Managed Objects for the Security Protocol of the Point-to-Point Protocol, June 1993.	
			IETF RFC 1473, Definitions of Managed Objects for the IP Network Control Protocol of the Point-to-Point Protocol, June 1993.	
			IETF RFC 1474, Definitions of Managed Objects for the Bridge Network Control Protocol of the Point-to-Point Protocol, June 1993.	
			IETF RFC 2021, Remote Network Monitoring Management Information Base Version 2, using SMIv2, January 1997.	Defines a set of standard objects for monitoring protocol communications services across a subnetwork on all seven layers of the OSI model.

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IETF RFC 2012, SNMPv2 Management Information Base for the Transmission Control Protocol (TCP), November 1996.	Defines a set of standard objects for managing a system's TCP services.
			IETF RFC 2013, SNMPv2 Management Information Base for the User Datagram Protocol (UDP), November 1996.	Defines a set of standard objects for managing a system's UDP services.
			IETF RFC 2248, Network Services Monitoring MIB, January 1998.	Defines MIB that serves as a basis for application specific monitoring and management.
			IETF RFC 2249, Mail Monitoring MIB, January 1998.	Allows for the monitoring of Message Transfer Agents (MTAs).
			IETF RFC 2605 Directory Server Monitoring MIB, June 1999.	Currently defines a set of standard objects for monitoring X.500 directory services and is being updated to add support for LDAP.

Section 4 – Information-Modeling, Metadata, and Information Exchange Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
4.2.1 Activity Modeling	IEEE 1320.1:1998, IEEE Standard for Functional Modeling Language-Syntax and Semantics for IDEF0.	FIPS PUB 183, Integration Definition for Function Modeling (IDEF0), December 1983, as based on the Air Force Wright Aeronautical Laboratories Integrated Computer-Aided Manufacturing (ICM) Architecture, Part II, Volume IV – Function Modeling Manual (IDEF0), June 1981.		
4.2.2 Data Modeling	FIPS PUB 184, Integration Definition for Information Modeling (IDEF1X), December 1993.	same		
4.2.3 DoD Data Model Implementation	DoD Manual 8320.1-M-1, DoD Data Standardization Procedures, April 1998.			
4.2.4 DoD Data Definitions	DoD Manual 8320.1-M-1, DoD Data Standardization Procedures, April 1998.	same		
	Defense Data Dictionary System (DDDS).	same		The DoD Data Model, used by the DDDS, is updated semi-annually (DDM is released in April and October) and data elements are updated dynamically as submitted by DoD Services, Agencies and Components.
4.2.5.2.1 Bit-Oriented Formatted Messages	MIL-STD-6016A, Tactical Digital Information Link (TADIL) J Message Standard, 30 April 1999.	MIL-STD-6016, Tactical Digital Information Link (TADIL) J Message Standard, 7 February 1997.		
	STANAG 5516, Edition 1, Tactical Data Exchange - LINK 16, Ratified 15 January 1997.	same		
	Variable Message Format (VMF), Technical Interface Design Plan (Test Edition) Reissue 3, 17 June 1998.	Joint Interoperability of Tactical Command and Control Systems Variable Message Format (VMF) Technical Interface Design Plan (Test Edition) Reissue 2, August 1996.		

Section 4 – Information-Modeling, Metadata, and Information Exchange Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
4.2.5.2.2 Character-Based Formatted Messages	MIL-STD-6040, United States Message Text Format (USMTF), 31 March 2000.	MIL-STD-6040, United States Message Text Format (USMTF), 1 January 1997.		
4.2.5.3 Binary Floating-Point Data Interchange	ANSI/IEEE 754-1985, IEEE standard for Binary Floating – Point Arithmetic, March 21, 1985			
4.3.1 Object Modeling			IEEE 1320.2-1998, IEEE Standard Conceptual Modeling Language-Syntax and Semantics for IDEF1X97 (IDEFobject).	
			Object Management Group (OMG) Unified Modeling Language (UML) Specification, Version 1.3, June 1999.	
			XML Metadata Interchange (XMI) Version 1.1, ad/99-10-22, 25 October 1999.	
			XML Metadata Interchange (XMI) Version 1.1– Appendices, ad/99-10-13, 25 October 1999.	
4.3.3 Information Exchange Standards			Multi-functional Information Distribution System (MIDS).	MIDS is a planned replacement for the Joint Tactical Information Distribution System (JTIDS). MIDS will provide secure jam-resistant communications, utilizing tactical digital data and voice. Message format standards for MIDS will not change from those of the JTIDS.

Section 4 – Information-Modeling, Metadata, and Information Exchange Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			STANAG 5522, Edition 1, Tactical Data Exchange - LINK 22 (Undated), 15 September 1995.	ADSIA((DLWG)-RCU-C-74-95, is the Multinamttional Group (MG) agreed Configuration Management (CM) baseline document.

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Section 5 – Human-Computer Interface Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
5.2.1.1 Character-Based Interfaces	DoD Human-Computer Interface HCI Style Guide, 30 April 1996	DoD HCI Style Guide, TAFIM Version 2.0, Volume 8, 30 September 1994		
5.2.2.1.1 X-Window Style Guides	M027: CDE 2.1/Motif 2.1 – Style Guide and Glossary, The Open Group ISBN 1-85912-104-7, October 1997	Open Software Foundation (OSF)/Motif Style Guide, Revision 1.2 (OSF 1992)		
	M028: CDE 2.1/Motif 2.1 – Style Guide Certification Check List, The Open Group ISBN 1-85912-1098, October 1997.	Open Software Foundation (OSF)/Motif Style Guide, Revision 1.2 (OSF 1992)		
	M029: CDE 2.1/Motif 2.1 – Style Guide Reference, The Open ISBN 1-85912-114-4, October 1997.	Open Software Foundation (OSF)/Motif Style Guide, Revision 1.2 (OSF 1992)		
5.2.2.1.2 Windows Style Guide	The Windows Interface Guidelines for Software Design, Microsoft Press, 1995	same		
5.2.2.2 DoD Human-Computer Interface Style Guide	DoD HCI Style Guide, 30 April 1996	same		
5.2.2.3 Domain-Level Style Guides	User Interface Specifications for the Defense Information Infrastructure (DII), Version 4.0, October 1999.	User Interface Specification for the Defense Information Infrastructure (DII), Version 2.0, June 1996		Version 1.0 had incorrectly cited “User Interface Specification for the Global Command and Control System (GCCS), October 1994” as the mandated standard in Appendix B
5.2.2.4 System-Level Style Guides	ISO 13407:1999 (E), Human-centred design processes for interactive systems, International Organization for Standardization reference number ISO 13407:1999(E), June 1999.			
5.2.3 Symbolology	MIL-STD-2525B, Common Warfighting Symbolology, 30 January 1999	MIL-STD-2525A, Common Warfighting Symbolology, 15 December 1996.		

Section 5 – Human-Computer Interface Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
5.3.1 Symbology			MIL-PRF-89045, DoD Performance Specification Geospatial Symbols for Digital Displays (GeoSym™) , 20 February 1998.	

Section 6 – Information Security Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
6.2 Mandated Standards	ISO/IEC 15408:1999, Information Technology – Security Techniques – Evaluation Criteria for IT Security (parts 1 through 3), 1 December 1999, also documented with the same technical content in Common Criteria (parts 1 through 3), Version 2.1.			
6.2.2.1 Application Software Entity Security Standards	FORTEZZA Application Implementers' Guide, MD4002101-1.52, 5 March 1996	same		
	FORTEZZA Cryptologic Interface Programmers' Guide (CIPG), Revision 1.52, 30 January 1996.	FORTEZZA Cryptologic Interface Programmers' Guide, MD4000501-1.52, 30 January 1996		
6.2.2.2.1. Authentication Security Standards	IETF RFC 1510, The Kerberos Network Authentication Service, Version 5, 10 September 1993	same		
	FIPS PUB 112, Password Usage, 30 May 1985	same		
6.2.3.1.1 Host Security Standards	FORTEZZA Interface Control Document, Revision P1.5, 22 December 1994	same		
	FIPS-PUB 140-1, Security Requirements for Cryptographic Modules, 11 January 1994.			
6.2.3.1.1.1 Security Algorithms	FIPS PUB 180-1, Secure Hash Algorithm-1, April 1995.			Note: The Hash function provides a check for data integrity.
	FIPS PUB 186-1, Digital Signature Standard (DSS) Digital Signature Algorithm (DSA), December 1998.	FIPS PUB 186, Digital Signature Standard, May 1994		
	FIPS PUB 185, SKIPJACK algorithm, February 1994, NSA, R21-TECH-044-91, 21 May 1991.	SKIPJACK, NSA, R21-TECH-044, 21 May 1991		
	R21-TECH-23-94, Key Exchange Algorithm (KEA), NSA, 12 July 1994	same		
6.2.3.1.1.2 Security Protocols	MIL-STD-2045-48501, Common Security Label, 1 September 1996.	same		

Section 6 – Information Security Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ITU-T Rec. X.509 (ISO/IEC 9594-8.2), Version 3, The Directory: Authentication Framework, 1997	ITU-T Rec. X.509 (ISO/IEC 9594-8.2), Version 3, The Directory: Authentication Framework, 1993		
	ACP-120, Allied Communications Publication 120, Common Security Protocol (CSP), Rev. A, 7 May 1998.	ACP-120, Allied Communications Publication 120, Common Security Protocol (CSP), 1997		
	IETF RFC 2311, S/MIME version 2, Message Specification, March 1998.	same		
	SDN.903, revision 3.2, Secure Data Network System (SDNS) Key Management Protocol (KMP), 1 August 1989			
6.2.3.2 Network Security Standards	SDN.301, Revision 1.5, Secure Data Network System (SDNS) Security Protocol 3 (SP3), 1989	same		
	MIL-STD-2045-48501, Common Security Label, 1 September 1996.	same		
6.2.6 Web Security Standards	Secure Sockets Layer (SSL) Protocol, Version 3.0, 18 November 1996.			
6.3.2.1.1 Web Security Standards			IETF RFC 2246, The Transfer Layer Security (TLS) Protocol Version 1.0, January 1999.	
			IETF RFC 2487, SMTP Service Extension for Secure SMTP over TLS, January 1999.	
6.3.2.2.1.1 Generic Security Service – Application Program Interface Security			IETF RFC 2743, Generic Security Service Application Program Interface, Version 2, Update 1 January 2000.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IETF RFC 2479 Independent Data Unit Protection Generic Security Service Application Program Interface (IDUP-GSS-API), <http://rfc2479.x42.com>, December 1998.	
6.3.2.2.2.1 Evaluation-Criteria Security Standards			For Basic Robustness/C2 systems: Controlled Access Protection Profile, Version 1.d, NSA 8 October 1999.	
			For Medium Robustness/B1 systems: Labeled Security Protection Profile, Version 1.b, NSA 8 October 1999.	
6.3.2.2.2.2 Authentication Security Standards			IETF RFC 2289, A One-Time Password System, February 1998.	
			IETF RFC 2138, "Remote Authentication Dial In User Service (RADIUS)," April 1997	
6.3.2.2.3 Distributed-Computing Services Security Standards			C311, DCE Authentication and Security Specification, August 1997.	
			OMG document formal/2000-06-25, Security Services Specification, version 1.5, May 2000.	
6.3.3.1.1.1 Security Protocols			IETF RFC 2633, S/MIME Version 3, Message Specification, June 1999.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IEEE 802.10, Standard for Interoperable LAN/MAN Security (SILS) 1998, Key Management (Clause 3, IEEE 802.10c-1998 (supplement), Architecture (Clause 1.4) (supplement).	This standard provides specification for an interoperable data link layer security protocol and associated security services. It discusses services, protocols, data formats, and interfaces to allow IEEE products confidentiality. A security label option is specified that enables rule-based access control to be implemented using the Security Data Exchange (SDE) protocol
6.3.3.1.1.2.2 Certificate Profiles			International Telecommunications Union - Telecommunications (ITU-T) Recommendation X.509, "Information Technology - Open Systems Interconnection - The Directory: Authentication Framework," June 1997 as profiled by:	
			RFC 2459, "Internet X.509 Public Key Infrastructure Certificate and CRL Profile," January 1999, IETF Proposed Standard as profiled by.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			Federal Public Key Infrastructure Technical Working Group (FPKITWG) document TWG-98-07, “Federal PKI X.509 Certificate and CRL Extensions Profile,” 9 March 1998; as profiled by: DoD Certificate Profile, as defined in X.509 Certificate Policy for the United States Department of Defense, version 5, 13 December 1999.	
6.3.3.1.1.2.3 Operational Protocols and Exchange Formats			IETF RFC 2559, “Internet X.509 Public Key Infrastructure Operational Protocols: LDAPv2,” April 1999, IETF Proposed Standard.	
			IETF RFC 2587, “Internet X.509 Public Key Infrastructure LDAPv2 Schema,” June 1999, IETF Proposed Standard.	
			RSA Laboratories Public Key Cryptography Standard #12, “Personal Information Exchange Syntax Standard,” version 1.0 (Draft), 30 April 1997.	
			RSA Laboratories Public Key Cryptography Standard (PKCS) #15, “Cryptographic Token Information Format Standard,” version 1.0, 23 April 1999.	
6.3.3.1.1.2.4 Management Protocols			IETF RFC 2315, Public Key Cryptography Standard (PKCS) #7, Cryptographic Message Syntax, Version 1.5, March 1998, Informational RFC.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IETF RFC 2314, PKCS #10, Certification Request Syntax, Version 1.5, March 1998, Informational RFC.	
6.3.3.1.1.2.5 Application Program Interfaces (APIs)			RSA Laboratories Public Key Cryptography Standard (PKCS) #11, Cryptographic Token Interface Standard," version 1.0, 28 April 1995.	
6.3.3.1.1.2.6 Cryptography			RSA Laboratories Public Key Cryptography Standard (PKCS) #1, "RSA Cryptography Standard," Version 2.0, 1 October 1998.	
			FIPS PUB 140-1 "Security Requirements for Cryptographic Modules," 11 January 1994. {DOD X.509 Certificate Policy specifies the FIPS 140-1 security levels required for PKI users, RAs, and CAs}.	
			FIPS PUB 46-3, "Data Encryption Standard," 8 January 1999. (This replaces DES with Triple DES, as specified in ANSI X9.52).	
			FIPS PUB 180-1, "Secure Hash Algorithm," April 1995.	
			AES Proposal: Rijndael by Joan Daemen and Vincent Rijmen, 9 March 1999, Version 2.	
6.3.3.2.1 Internetworking Security Standards			IETF RFC 2401, Security Architecture for the Internet Protocol, November 1998.	
			IETF RFC 2402, IP Authentication Header, November 1998.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IETF RFC 2406 IP Encapsulating Security Payload (ESP), November 1998.	
			IETF RFC 2104, HMAC: Keyed-Hashing for Message Authentication, February 1997	
			IETF RFC 1829, The ESP DES-CBC Transform, August 1995	
			IETF RFC 2451, The ESP CBC-Mode Cipher Algorithms, November 1998.	
			IETF RFC 2405, The ESP CBC-Mode Cipher Algorithm with Explicit IV, November 1998.	
			Draft FIPS 46-3, Data Encryption Standard (DES).	
			IETF RFC 2420, The PPP Triple-DES Encryption Protocol (3DESE) as a complement to FIPS 46-3.	
			IETF RFC 2065, DNS Security Extensions, January 1997	
			IETF RFC 2408, Internet Security Association and Key Management Protocol (ISAKMP), 21 February 1998.	
			IETF RFC 2407, Internet Draft, The Internet IP Security Domain of Interpretation for ISAKMP, November 1998.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IEEE 802.10, IEEE Standard for Interoperable LAN/MAN Security (SILS), 1998; Key Management (Clause 3), IEEE 802.10c-1998 (Supplement) and Security Architecture Framework (Clause 1), IEEE Std. 802.10a-1999 (Supplement).	Incorporates IEEE 802.10b-1992 Secure Data Exchange Clause 2. Changed Date.
			IETF RFC 2228, File Transfer Protocol, October 1997.	
			draft-IETF-secsh-architecture-05.txt, Secure Shell (SSH) Protocol Architecture, May 2000.	
			draft-IETF-secsh-architecture-04.txt, SSH Protocol Architecture, T. Ylonen, 1999.	
6.3.3.2.2 Firewall Standards			U.S. Government Traffic Filtering Firewall for Low Risk Environments, Version 1.1, April 1999.	
			U.S. Government Application-level Firewall Protection Profile for Low Risk Environments, July 20, 1999.	
			U.S. DoD Traffic Filtering Firewall For Medium Robustness, Version 1.0, 26 January 2000.	
			U.S. DoD Application-level Firewall for Medium Robustness Environments version 1.0, 7 February 2000.	
6.3.3.2.3 Virtual Private Network (VPN)			Virtual Private Network Protection Profile for Protecting Sensitive Information, version 1.0, 26 February 2000.	

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JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
6.3.3.2.4 Intrusion Detection Systems			Intrusion Detection System Analyzer Protection Profile, 30 December 1999.	
			Intrusion Detection System Sensor Protection Profile, 30 December 1999.	
			Intrusion Detection System Scanner Protection Profile, 4 January 2000.	

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C4ISR Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
C4ISR.2.2.2.1 Still-Imagery Data Interchange	STDI0002, ICHIPB Support Data Extensions for the National Imagery Transmission Format, Version 1.0, 16 November 1998; as documented in Section 5 of The Compendium of Controlled Extensions (CE) for the National Imagery Transmission Format (NITF) Version 2.0, 4 March 1999.	Common Imagery Ground/Surface System (CIGSS) Acquisition Standards Handbook, Version 1, 19 July 1995		
	STDI0002, National Imagery Transmission Format Profile for Image Access Extensions (PIAE), Version 3.0, 25 September 1997; as documented in Section 6 of The Compendium of Controlled Extensions (CE) for the National Imagery Transmission Format (NITF) Version 2.0, 4 March 1999.	Common Imagery Ground/Surface System (CIGSS) Acquisition Standards Handbook, Version 1, 19 July 1995		
	STDI0002, Airborne Support Data Extension (ASDE), Version 1.0, 13 January 1999; as documented in Section 8 of The Compendium of Controlled Extensions (CE) for the National Imagery Transmission Format (NITF) Version 2.0, 4 March 1999.	Common Imagery Ground/Surface System (CIGSS) Acquisition Standards Handbook, Version 1, 19 July 1995		
	STDI0002, HISTOA Extension, 25 August 1998; as documented in Section 15 of The Compendium of Controlled Extensions (CE) for the National Imagery Transmission Format (NITF) Version 2.0, 4 March 1999.			
C4ISR.2.2.3 Emerging Standards			STANAGE 4545, NATO Secondary Imagery Format (NSIF), 27 November 1998.	
C4ISR.2.2.3.1 Common Ground Moving Target Indicator Data Format			Common Ground Moving Target Indicator (CGMTI) Data Format Document, DRAFT Version 1.01d2, 25 July 2000.	
C4ISR.2.3.2.1.1.1 Common Data Link Standards	System Specification for the CDL Segment, Specification 7681990, Revision D, 29 January 1997.	same		This standard previously appeared in the Airborne Reconnaissance Annex (C4ISR.AR)
	System Description Document for CDL, Specification 7681996, 5 May 1993.	same		This standard previously appeared in the Airborne Reconnaissance Annex (C4ISR.AR)

C4ISR Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
C4ISR.2.3.2.1.1.2 Unattended MASINT Sensor Communication Standards	Interface Specification, Radio Frequency Transmission Interfaces for DoD Physical Security Systems, SEIWG-005, 15 December 1981.	same		This standard previously appeared in the Airborne Reconnaissance Annex (C4ISR.AR)
C4ISR.2.3.3 Emerging Standards			ICD-SLP-200, September 14, 1998. Interface Control Document (ICD) Title: Sensor Link Protocol.	
C4ISR.2.4.2.1.1 Target/Threat Data Interchange Standards	NTSDS Database Implementation Description & Core Schema Definition, Version 1.2a, 19 September 1997.			
	NTSDS Supplemental Schema Definition, Version 1.1, 24 September 1997.			
C4ISR.3.2.2.1.1 Fibre Channel	ANSI X3.230-1994/AM 2-1996, Information Technology – Fibre Channel – Physical and Signaling Interface (FC-PH), with amendments, 24 May 1999.	ANSI X3.230, Information Technology - Fiber Channel - Physical and Signaling Interface (FC-PH), (800 Mb/s), 1 January 1996		This standard previously appeared in the Airborne Reconnaissance Annex (C4ISR.AR)
C4ISR.3.2.2.1.2 FireWire	IEEE Std 1394-1995, IEEE Standard for a High Performance Serial Bus, December 1995.			
C4ISR.3.2.2.2 Vehicle/Sensor Telemetry	Telemetry Group, Range Commanders Council, Telemetry Standards, IRIG 106-96, Secretariat, Range Commanders Council, U.S. Army White Sands Missile Range, New Mexico, Chapter 4, Pulse Coded Modulation Standards, Chapter 8 - MIL-STD-1553 Department of Defense Interface Standard for Digital Time Division Command/Response Multiplex Data Bus, 21 March 1996.	same		This standard previously appeared in the Airborne Reconnaissance Annex (C4ISR.AR)

C4ISR Cryptologic Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
C4ISR.CRY.3.2. 1 Small-Scale Special-Purpose Devices	Peripheral Component Interconnect (PCI) Standard, Version 2.2, 1999.			
	PC Card Standard, Release 7.0, March 1997 (The PC Card standard is a Personal Computer Memory Card International Association (PCMCIA) standards body and trade association standard).			
C4ISR.CRY.3.2. 2 Backplanes and Circuit Cards	ANSI/VITA 1-1994, American National Standard for VME64.			
	IEEE 1155-1992, IEEE Standard for VMEbus Extensions for Instrumentation (VXI).			
C4ISR.CRY.3.2. 3 Conduction Cooling	IEEE 1101.2-1992, IEEE Standard for Mechanical Core Specifications for Conduction Cooled Eurocards.			
C4ISR.CRY.3.3. 1 Backplanes and Circuit Cards			CompactPCI (cPCI), Version 1.0, 1996	

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C4ISR Nuclear Command and Control Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
C4ISR.NCC.2 .3.2 Mandated Standards	HDR-SSS-01-S-REC0, Very Low Frequency/Low Frequency (VLF/LF) High Data Rate (HIDAR) Mode Standard.			
	NAVELEX 28687-0119-404; MEECN Message Processing Mode Standard.			
C4ISR.NCC.2 .4.2 Mandated Standards	Emergency Action Procedures (EAP) Chairman Joint Chiefs of Staff (CJCS), Volume V, "CJCS Control Orders (U)," revised annually (U.S. TOP SECRET).			
	EAP CJCS Volume VII "EAM Dissemination and Force Report Back (U)," revised annually (U.S. TOP SECRET).			
C4ISR.NCC.2 .5.3 Emerging Standards			HMI DIRECT ICD, "Human-Machine Interface (HMI) Design Criteria," CDRL 135C-03,V3.0, 5 March 99.	

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C4ISR Space Reconnaissance Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
C4ISR.SR.2.2 .3 Emerging Standards			C321 Calendaring and Scheduling API (XCS), Open Group Technical Standard, ISBN 1-85912-076-8, April 1995.	
C4ISR.SR.2.3 .2 Mandated Standards	GR-253, Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria, Rev01, Bellcore, December 1997.			
C4ISR.SR.2.3 .2.1 Point-to-Point Standards	TIA/EIA-422-B, Electrical Characteristics of Balanced Voltage Digital Interface Circuits, May 1994.			

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Combat Support Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
CS.2.2.2.1 Document Interchange	MIL-PRF-28001C, Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text (CALS SGML), 2 May 1997	same		
	MIL-STD-1840C, Automated Interchange of Technical Information (AITI), 26 June 1997	same		
CS.2.2.2.2 Graphics Data Interchange	ISO/IEC 8632, Information Technology – Computer Graphics – Metafile for the Storage and Transfer of Picture Description Information which is comprised of the following parts: 8632-1:1999 Functional Specification; 8632-3:1999 Binary encoding; 8632-4:1999 Clear text encoding as profiled by MIL-PRF-28003B, Digital Representation for Communication of Illustration Data: CGM Application Profile, 30 April 2000.	ANSI/ISO 8632, as profiled by MIL-PRF-28003A, CGM Application Profile, with Amendment 1, 14 August 1992		
	MIL-PRF-28002C, Performance Specification, Requirements for Raster Graphics Representation in Binary Format, 30 September 1997	same		
CS.2.2.2.3 Product Data Interchange	ANSI/US Product Data Association (PRO)-100-1996, Initial Graphics Exchange Specification (IGES), V5.3, 23 September 1996, as profiled by MIL-PRF-28000B, Digital Representation for Communications of Product Data: IGES Application Subsets and IGES Application Protocols, 30 September 1999	FIPS PUB 177-1, IGES, adopts CALS IGES and ANSI/US PRO-100-1993, V5.2, 23 April 1996		
	ANSI/PC-D-350D, Printed Board Description in Digital Form, July 1, 1992.			
	ANSI/IEEE 1076, 1993, IEEE Standard VHDL Language Reference Manual.			
	MIL-STD-1840C, Automated Interchange of Technical Information, 26 June 1997	same		
	ANSI/AIM-BC1-1995, Uniform Symbology Specification Code 39, 16 August 1995.	same		
CS.2.2.2.4 Electronic Data Interchange	ANSI ASC X12 Electronic Data Interchange, as profiled by FIPS PUB 161-2, Electronic Data Interchange, 22 May 1996.	same		
	ISO 9735 UN/EDIFACT, Application Level Syntax Rules, as profiled by FIPS PUB 161-2, Electronic Data Interchange, 22 May 1996.	same		

Combat Support Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
CS.2.2.3.1 Product Data Interchange			ISO 10303, Industrial Automation Systems and Integration - Product Data Representation and Exchange; Part 1, Overview and fundamental concepts, 1994; Part 11, Description methods: The EXPRESS language reference manual, 1994; Part 12, Description methods: The EXPRESS-language reference manual, 1997; Part 21, Implementation methods: Clear text encoding of the exchange structure, 1994; Part 22, Implementation methods: Standard data access interface specification, 1998; Part 31, Conformance testing methodology and framework: General concepts, 1994; Part 32, Conformance testing methodology and framework: Requirements on testing laboratories and clients, 1998; Part 41, Integrated generic resources:	This standard was mandated in 3.0, but moved due to implementation issues,

Combat Support Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			Fundamentals of product description and support, 1994; Part 42, Integrated generic resources: Geometric and topological representation, 1994; Part 43, Integrated generic resources: Representation structure, 1994; Part 44, Integrated generic resources: Product structure configuration, 1994; Part 45, Integrated generic resources: Materials, 1998; Part 46, Integrated generic resources: Visual presentation, 1994; Part 47, Integrated generic resources: Shape variation tolerances, 1997; Part 49, Integrated generic resources: Process structure and properties, 1998; Part 101, Integrated application resources: Draughting, 1994; Part 105, Integrated application resources: Kinematics, 1996; Part 201, Application protocol: Explicit draughting	

Combat Support Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			(equivalent to IGES), 1994; Part 202, Application protocol: Associative draughting, 1996; Part 203, Application protocol: Configuration controlled design, 1994; Part 224, Application protocol: Mechanical product definition for process planning using machining features, 1999.	
			ISO/IEC 13584:1998, Industrial Automation Systems and Integration - Parts Library - Part 20; Logical Resource: Logical Model of Expressions; Part 42: Description Methodology: Methodology for Structuring Part Families.	
CS.2.4.2.1 Electronic Fingerprint Information-Exchange Standards	ANSI/NIST-ITL 1-2000 Data Format for the Interchange of Fingerprint, Facial, and Scar Mark and Tatoo (SMT) Information, July 2000 (revision, redesignation and consolidation of ANSI/NIST-CSL 1-1993 and ANSI/NIST-ITL 1a-1997).			
CS.3.1.2.1 Smart-Card Technology Standards	ISO/IEC 7816 Identification Cards – Integrated Circuit(s) cards with contacts; Part 1, Physical characteristics, October 1998; Part 2, Dimensions and location of the contacts, March 1999; Part 3, Electronic signals and transmission protocols, December 1997; Part 4, Interindustry commands for interchange, September 1995; Part 5, Numbering system and registration procedure for application identifiers, June 1994; Part 6, Interindustry Data Elements, May 1996; Part 7, Interindustry commands for Structured Card Query Language (SCQL), March 1999.			

Combat Support Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	ISO/IEC 10536 Identification Cards – Contactless integrated circuit(s) card; Part 1, Physical characteristics, September 1992; Part 2, Dimensions and location of coupling areas, December 1995; Part 3, Electronic signals and reset procedures, December 1996.			
CS.3.1.3.1 Smart-Card Technology Standards			ISO/IEC 7816 Identification Cards – Integrated circuit(s) card with contacts; Part 8, Security architecture and related interindustry commands, November 1998; Part 9, Enhanced interindustry commands, October 1999; Part 10, Electronic signals and answer to reset for synchronous cards, April 1998.	
			ISO/IEC 10536-4 Identification Cards - Contactless integrated circuit(s) card; Part 4, Answer to reset and transmission protocols, September 1995.	
			ISO/IEC 14443 Identification Cards - Contactless integrated circuit(s) cards - Proximity integrated circuit(s) cards; Part 1 Physical characteristics, July 1998; Part 2, Radio Frequency Interface, October 1999; Part 3, Initialization and anti-collision, October 1999; Part 4 Transmission protocols, October 1999.	

Combat Support Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			ISO/IEC 15693 Identification Cards - Contactless integrated circuit(s) - Vicinity cards; Part 1, Physical characteristics, October 1999; Part 2, Air interface and initialization, October 1999; Part 3, Protocols, October 1999; Part 4, Registration of applications and issuers, October 1996.	

Combat Support Automatic Test System SubdomainSubdomain Standards

JTA Section & Service Areas	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
CS.ATS.2.2.2.1.1 Instrument Driver API Standards	VXIplug&play Systems Alliance Instrument Driver Functional Body Specification VPP-3.2, Revision 4.0, 2 February 1996			
CS.ATS.2.2.2.1.2 Digital Test Data Formats	IEEE 1445-1998, Standard for Digital Test Interchange Format (DTIF).			
CS.ATS.2.2.3.1.1 Resource Adapter Interface			VXIplug&play Systems Alliance VPP-3.1: Instrument Drivers Architecture and Design Specification Revision 4.1 December 4, 1998.	
			VXIplug&play Systems Alliance VPP-3.2: Instrument Driver Functional Body Specification Revision 5.0 December 4, 1998.	
			VXIplug&play Systems Alliance VPP-3.3: Instrument Driver Interactive Developer Interface Specification Revision 3.0 December 4, 1998.	
			VXIplug&play Systems Alliance VPP-3.4: Instrument Driver Programmatic Developer Interface Specification Revision 2.2 December 4, 1998.	
			IVI-4 Aug 98: IviScope Class.	
			IVI-5 Aug 98: IviDmm - Digital Multimeter Class.	
			IVI-6 Aug 98: IviFGen - Function Generator/ Arbitrary Waveform Generator Class.	

Combat Support Automatic Test System SubdomainSubdomain Standards

JTA Section & Service Areas	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			IVI-7 Aug 98: IviPower - Power Supply Class.	
			IVI-8 Aug 98: IviSwitch - Switch Matrix/Multiplexor Class.	
CS.ATS.2.2.3.1.2 Diagnostic-Processing Standards			IEEE 1232-1998, Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE) Overview and Architecture.	
			IEEE 1232.1-1997, Trial Use Standard for AI-ESTATE Data and Knowledge Specification.	
			IEEE 1232.2-1998, Trial Use Standard for AI-ESTATE Service Specification.	
CS.ATS.2.2.3.1.3 UUT Test Requirements Data Standards			IEEE Computer Society Test Technology Technical Committee Test Requirements Model (TeRM).	
CS.ATS.2.3.2.1 Instrument Communication Manager Standards	VXI plug&play (VPP) Systems Alliance Virtual Instrument Standard Architecture (VISA) Library, VPP-4.3, 22 January 1997.			
CS.ATS.2.3.3.1 Maintenance Test Data and Services (MTD)			IEEE P1522 IEEE Testability Standard.	
			IEEE 1545-1999 Trial Use Standard for Parametric Data Logging and Format.	
CS.ATS.2.3.3.2 Product Design Data (PDD)			ANSI/EIA 682:1996, EDIF Electronic Design Interchange Format, Version 399, Reference Manual and Information Model.	

Combat Support Automatic Test System SubdomainSubdomain Standards

JTA Section & Service Areas	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
CS.ATS.2.3.3.3 Built-In Test Data (BTD)			IEEE 1149.1-1990 IEEE Standard Test Access Port and Boundary-Scan Architecture.	
			IEEE P1149.4-1999 Mixed-Signal Test Bus.	
			IEEE 1149.5-1995 IEEE Standard for Module Test and Maintenance Bus (MTM-Bus) Protocol.	
			IEEE 1545-1999, Standard for Parametric Data Log Format 1999.	
CS.ATS.3.3.2.1 System Framework Standards	VXI plug&play System Alliance System Frameworks Specification, VPP-2, Revision 4.0, 29 January 1996.			
CS.ATS.3.3.3.1 Receiver/Fixture Interface			IEEE P1505 Receiver Fixture Interface (RFI) Standard.	
CS.ATS.3.3.3.2 Switching Matrix Interface			IEEE P1552-1999, Standard Architecture for Test Systems (SATS).	

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Combat Support Defense Transportation System Subdomain Standards

JTA Section & Service Areas	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
CS.DTS.2.2.2.1 Product Data Interchange	PDF-417 as profiled by ANSI MH10.8.3M-1996, Material Handling – Unit Loads and Transport Packages – Two-Dimensional Symbols.			
CS.DTS.2.6.3.1 Internetworking Security Standards			draft-IETF-secsh-transport-07.txt, “SSH Transport Layer Protocol,” May 2000.	
			draft-IETF-secsh-userauth-07.txt, “SSH Authentication Protocol,” May 2000.	
			draft-IETF-secsh-connect-07.txt, “SSH Connection Protocol,” May 2000.	

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Combat Support Medical Subdomain Standards

JTA Section & Service Areas	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
CS.MED.2.2.2.1 Medical Electronic Data Interchange	Health Level Seven (HL7), Version 2.3.1, Application Protocol for Electronic Data Exchange in Healthcare Environments, 1999.			This standard appeared in JTA V2.0 mandated under CS.2.2.4 Electronic Data Interchange
CS.MED.2.2.2.2 Retail Pharmacy Claims Electronic Data Interchange	NCPDP Telecommunication Standard, Version 3.2, 1992.			
	NCPDP Batch Transactions, Version 1.0, 1996.			
CS.MED.2.2.2.3 Medical Still-Imager Data Interchange	Digital Imaging and Communications in Medicine (DICOM), 1999, PS 3.1 through PS 3.14	Digital Imaging and Communications in Medicine (DICOM), Version 3.0 1993		
CS.MED.2.2.2.4 Medical Information-Exchange Standards	ISBT 128, Bar Code Symbology and Application Specification for Labeling of Whole Blood and Blood Components, 1995 (for bar-coding blood donor number label information on blood bags).			
	Universal Product Number (UPN) System, 1996 (for identifying medical and surgical products in the supply chain).			
CS.MED.2.2.3.1 Commercial Electronic Data Interchange			X12N 270, Version 004010X092, Health Care Eligibility/Benefit Inquiry.	
			X12N 271, Version 004010X092, Health Care Eligibility/Benefit Information Response.	
			X12N 276, Version 004010X093, Health Care Claim Status Request.	
			X12N 277, Version 004010X093, Health Care Claim Status Response.	

Combat Support Medical Subdomain Standards

JTA Section & Service Areas	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
			X12N 278, Version 004010X094, Health Care Services Request for Review and Response.	
			X12N 820, Version 004010X061, Payroll Deducted and Other Group Premium Payment for Insurance Products.	
			X12N 834, Version 004010X095, Health Care Benefits and Enrollment and Maintenance.	
			X12N 835, Version 004010X091, Health Care Claim Payment/Advice.	
			X12N 837, Version 004010X096, Health Care Claim: Institutional.	
			X12N 837, Version 004010X097, Health Care Claim: Dental.	
			X12N 837, Version 004010X098, Health Care Claim: Professional.	
CS.MED.2.2.3.2 Retail Pharmacy Claim Electronic Data Interchange			NCPDP Telecommunications Standard, Version 5.1, 1999.	

Modeling and Simulation Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
M&S.2.2.2.1 HLA Framework and Rules	U.S. Department of Defense, High-Level Architecture (HLA) - Rules, Version 1.3, 5 February 1998. (20 April 1998 Document Release)			
	U.S. Department of Defense, High-Level Architecture Interface Specification, Version 1.3, dated 2 April 1998.			
M&S.2.2.2.2 HLA Federate Interface Specification	OMG Facility for Distributed Simulation Systems, Version 1.0, dated 10 November 1998			
	U.S. Department of Defense, High-Level Architecture Interface Specification, Version 1.3, dated 2 April 1998.			
M&S.2.2.2.3 HLA Object Model Template (OMT)	U.S. Department of Defense, High-Level Architecture Object Model Template Specification, Version 1.3, 5 February 1998 (20 April 1998 document release).	High Level Architecture Object Model Template, Version 1.3, February 1998		
M&S.2.2.3 Emerging Standards			IEEE 1516-2000, IEEE Standard for Modeling and Simulation (M&S) High Level Architecture (HLA) – Framework and Rules.	
			IEEE P 1516.1-2000, IEEE Standard for Modeling and Simulation (M&S) High Level Architecture (HLA) – Federate Interface Specification, DRAFT 1 dated 20 April 1998.	
			IEEE P 1516.2-2000, IEEE Standard for Modeling and Simulation (M&S) High Level Architecture (HLA) – Object Model Template (OMT) dated 5 February 1998 (20 April 1998 Document Release).	

Modeling and Simulation Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
M&S.2.4.2.1 Federation Execution Details Data Interchange Format	Federation Execution Details Data Interchange Format, Version 1.3, February 1998.	same		
M&S.2.4.2.2 Object Model Template Data Interchange Format	Object Model Template Data Interchange Format (OMT DIF), Version 1.3, February 1998	same		
M&S.2.4.2.3 Standard Simulator Database Interchange Format	MIL-STD-1821, Standard Simulator Data Base (SSDB) Interchange Format (SIF) Design Standard, 17 June 1993, with Notice of Change 1, 17 April 1994, and Notice of Change 2, 17 February 1996.	same		
M&S.2.4.3.1 Synthetic Environment Data Representation and Interchange Specification (SEDRIS)			WD 18023: SEDRIS Functional Specification (including the SEDRIS Data Model, the Read and Write APIs, and the SEDRIS Transmittal Format), Version 1, 21 January 2000.	
			WD 18024: SEDRIS Language Bindings: C, Version 1, 21 January 2000.	
			WD 18025: Environmental Data Coding Specification (EDCS), Version 1, 21 January 2000.	
			WD 18026: Spatial Reference Model (SRM), Version 1, 21 January 2000.	

Weapon Systems Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.2.2.3.1 Operating System Services			IEEE P1003.5f POSIX: Ada binding to 1003.21, January 1997	
WS.2.4.3 Emerging Standards			IEEE 1076: 1993, Standard VHSIC Hardware Description Language (VHDL) Reference Manual, 1993 (VHDL is a high-level hardware language).	
			IEEE 1076.2: VHDL Mathematical Package, 1996	
			IEEE 1076.3: Standard VHDL Synthesis Packages, 1997	
WS.2.5.3 Emerging Standards			U.S. Army Weapon Systems Human-Computer Interface (WSHCI) Style Guide, Version 2.0, 31 December 1997	
WS.3.5.3 Emerging Standards			IEEE P1386.1/D2.0, Physical/Environmental Layers for Peripheral Component Interface (PCI) Mezzanine Cards, (PMC), April 1995	
			ATSC Document A/53, ATSC Digital Television Standard, 16 September 1995	
W.S.3.6.1.2 Mandated Standards	Aeronautical Telecommunications: Appendix 10 to the Convention on International Civil Aviation, volume IV (Surveillance Radar and Collision Avoidance Systems), Edition 1, International Civil Aviation Organization (ICAO): Montreal, 1995, with Supplements (31 May 1996 and 10 November 1997).			
	DOT FAA 1010.51A, US National Aviation Standard for the Mark X (SIF) Air Traffic Control Radar Beacon system (ATCRBS) Characteristics, 8 March 1971.			

Weapon Systems Domain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
	DoD AIMS 97-1000, Performance/Design and Qualification Requirements Technical Standard For The ATCRBS/IFF/MARK XII Electronic Identification System and Military Mode S, 18 March 1998.			
	DoD AIMS 97-900, Performance/Design And Qualification Requirements Mode 4 Input/Output Data, 18 March 1998.			
	STANAG 4193, Part 1, Edition 2, 12 November 1990, with Amendment 1, 15 December 1997: NATO Standard Agreement Technical Characteristics of IFF Mk XA and Mk XII Interrogators and Transponders			
	STANAG 4193, Part 2, Edition 1, 12 November 1990 (SECRET): NATO Standard Agreement Technical Characteristics of IFF Mk XA and Mk XII Interrogators and Transponders.			
	STANAG 4193, Part 3, Edition 1, 12 November 1990, with Amendment 1, 31 January 1995: NATO Standard Agreement Technical Characteristics of IFF Mk XA and Mk XII Interrogators and Transponders.			
	STANAG 4193, Part 4, 28 November 1997: NATO Standard Agreement Technical Characteristics of IFF Mk XA and Mk XII Interrogators and Transponders.			
WS.3.6.1.3 Emerging Standards			STANAG 4193 Part 5, Annex A through D, 4 September 1998 (SECRET NATO RESTRICTED): NATO Standard Agreement Technical Characteristics of IFF Mk XA and Mk XII Interrogators and Transponders.	

Weapon Systems Aviation Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.AV.2.5.3 Emerging Standards			MIL-STD-1787C (USAF), Aircraft Display Symbolology.	
WS.AV.3.1.3 Emerging Standards			RTCA DO-224 – Change 1, Signal-in-Space Minimum Aviation Systems Performance Standards (MASPS) Advanced VHF Digital Data, Communications Including Capability with Digital Voice Technique, 30 April 1998.	
			International Civil Aviation Organization (ICAO) Annex 10, Volume III, SARPs for High Frequency Data Link (HFDL), July 1995.	
			RTCA DO-210C, Minimum Operational Performance Standards For Aeronautical Mobile Satellite Services (AMSS), 16 January 1996.	
			RTCA DO-219, Minimum Operational Performance Standards for ATC Two-Way Data Link Communications, 27 August 1993.	
			RTCA DO-212, Minimum Operational Performance Standards for Airborne Automatic Dependent Surveillance (ADS) Equipment, 26 October 1992.	
			RTCA DO-181A, Minimum Operational Performance Standards for Air Traffic Control Radar Beacon System/Mode Select (ATCRBS/Mode S), Airborne Equipment, 14 January 1992, Change 1 errata 14 January 1993.	

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Weapon Systems Ground Vehicle Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.GV.2.2.3 Emerging Standards			Weapon Systems Technical Architecture Working Group (WSTAWG) Operating Environment (OE) Application Programmer's Interface (API), Volume I, OE Application Interface, Version 1.0, 12 June 1998.	
WS.GV.3.5.2 Mandated Standards	MIL-STD-1553B, Standard for Medium Speed System Network Bus, 21 September 1978, with Notice of Change 1, 12 February 1980; Notice of Change 2, 8 September 1986; Notice of Change 3, 31 January 1993; and Notice of Change 4, 15 January 1996.	same		
	ANSI/VITA 1, VME64 Specification, 1994.	same		
	SAE J 1850, Class B Data Communication Network Interface, 1 July 1995.	same		
	ANSI X3.131, Information Systems - Small Computer Systems Interface - 2 (SCSI-2), 1994.	same		
	Personal Computer Memory Card International Association (PCMCIA), PC Card Standard, March 1997.	same		
	IEEE 1101.2, Standard for Mechanical Core Specifications for Conduction-Cooled Eurocards (ANSI), 1992.	same		
	EIA 330, Electrical Performance Standards for Closed Circuit Television Camera 525/60 Interlaced 2:1 (ANSI/EIA 330-68), November 1966.	same		
	EIA 343-A, Electrical Performance Standard for High Resolution Monochrome Closed Circuit Television Camera (November 1966), September 1969	same		
	PCI Industrial Computer Manufacturer's Group (PICMG): Compact PCI Specification, R2.1, September 1997.			
	EIA 170, Electrical Performance Standards - Monochrome Television Studio Facilities, November 1957.	same		
	SMPTE 170M, Television - Composite Analog Video Signal - NTSC for Studio Applications, 1994	same		

Weapon Systems Ground Vehicle Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.GV.3.5.3			SAE J1939, Recommended Practice for a Serial Control and Communications Vehicle Network, April 2000.	
			SAE J1708: Serial Data Communications Between Microcomputer Systems in Heavy-duty Vehicle Applications, October 1993.	
			SAE J1587: Joint SAE/TMC Electronic Data Interchange Between Microcomputer Systems in Heavy-duty Vehicle Applications, July 1998.	

Weapon Systems Missile Defense Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.MD.2.2.3.1 Navigation Standard			Ballistic Missile Defense (BMD) Positioning, Navigation, and Timing (PNT) Standard, 20 July 2000, Ballistic Missile Defense Organization.	Maps to 2.2.2.1.4.3 in the Core.
WS.MD.2.3.3.1 Joint Range Extension (JRE) Application Protocol (JREAP)			Joint Range Extension Application Protocol (JREAP) for Encapsulation into Joint Technical Architecture (JTA) Compliant Protocols, Joint Range Extension Application Protocol Working Group, Version 1.0, 19 July 2000.	
WS.MD.2.4.2.1 Bit-Oriented Formatted Messages	MIL-STD-6016A, Tactical Digital Information Link (TADIL) J Message Standard, 30 April 1999.			
WS.MD.2.5.2.1 Symbology	MIL-STD-2525B, Common Warfighting Symbology, 30 January 1999.			

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Weapon Systems Missile Systems Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.MS.3.5.2 Mandated Standards	IEEE 1101.2, Standard for Mechanical Core Specifications for Conduction-Cooled Eurocards (ANSI), 1992.			
WS.MS.3.5.3 Emerging Standards			MIL-STD-1553B, Interface Standard for Digital Time Division Command/Response Multiplex Data Bus, 21 September 1978, with Notice of Change 1, 12 February 1980, Notice of Change 2, 8 September 1986, Notice of Change 3, 31 January 1993, and Notice of Change 4, 15 January 1996.	
			PCI Industrial Computer Manufacturers Group (PICMG): Compact PCI Specification, R2.1, September 1997.	
			ANSI X3.131, Information Systems - Small Computer Systems Interface - 2 (SCSI-2), 1994.	
			Personal Computer Memory Card International Association (PCMCIA), PC Card Standard, March 1997.	
			SAE J 1850, Class B Data Communication Network Interface, 1 July 1995.	
			ANSI/VITA 1, VME64 Specification, 1994.	

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Weapon Systems Munition Systems Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.MUS.3.5.2 Mandated Standards	ANSI X3.131, Information Systems – Small Computer Systems Interface – 2 (SCSI-2), 1994.			
	PCI Industrial Computer Manufacturer’s Group PICMG: Compact PCI Specification, R2.1, September 1997.			
	Personal Computer Memory Card International Association (PCMCIA), PC Card Standard, March 1997.			

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Weapon Systems Soldier Systems Subdomain Standards

JTA Section & Service Area	Currently Mandated Standard, Title, & Date	Previously Mandated Standard	Emerging Standard	Comments
WS.SS.3.5.2 Physical Resources Layer Interface	EIA 170, Electrical Performance Standards – Monochrome Television Studio Facilities, November 1957.			
	SMPTE 170M, Television – Composite Analog Video Signal – NTSC for Studio Applications, 1994.			

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